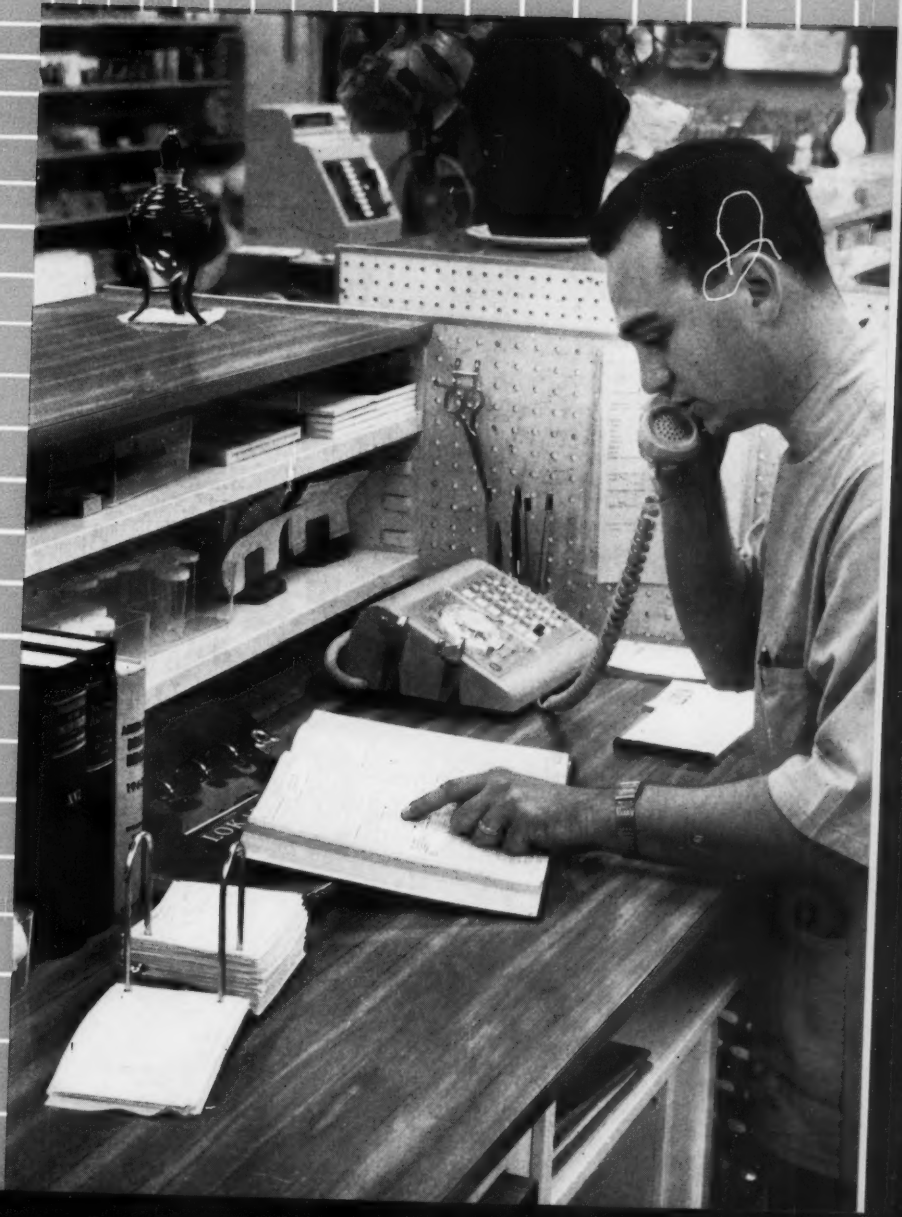
4th Stack

DETROIT PUBLIC LIBRARY
MAY 2 1961
GENERAL INFORMATION

Journal of the
American Pharmaceutical Association
MARCH 1961

the Expanding Role of the Community Pharmacist



ENOVID®

(BRAND OF NORETHYNODREL WITH ETHYNYLESTRADIOL 3-METHYL ETHER)

NOW AVAILABLE IN 4 PACKAGE SIZES

ENOVID / **Uncoated, unscored tablets of 5 mg. . . . List No. 56**
Uncoated, scored tablets of 10 mg. . . . List No. 67

Package Size	Tablet Size	Price to Pharmacist	Retail F.T.M. (where applicable)	Color Key
Vials of 20	5 mg.	$ 2.10	$ 3.50	Red bar
Vials of 20	10 mg.	4.20	7.00	Green bar
Bottles of 50	10 mg.	10.20	17.00	Green bar
Bottles of 500	10 mg.	99.00	165.00	Green bar

ENOVID, Searle's synthetic, *orally effective* steroid, gives the physician reliable control of the menstrual cycle.

ADMINISTRATION: As a service to you and your physicians, both the Enovid Index Card and the Searle Physicians' Product Brochure No. 67 give complete dosage information.

G. D. SEARLE & CO.
P. O. BOX 5110, CHICAGO 80, ILLINOIS

ETHICAL PHARMACEUTICALS SINCE 1888

PUBLISHER
American Pharmaceutical Association

EDITOR
William S. Apple

MANAGING EDITOR
George B. Griffenhagen

ASSOCIATE EDITOR
E. Dorothea Olson

STAFF
Advertising Co-ordinator: Joan Branscomb
Art Editor: Paul Reed
Contributors: Marjorie Coghill
Jacqueline Saba
Robert Steeves
Editorial Assistant: Vicki Van Pelt

COMMITTEE ON PUBLICATIONS
Chairman: Howard C. Newton, William S. Apple, Grover C. Bowles, Hugo H. Schaefer, Linwood F. Tice

ASSOCIATION OFFICERS
President: Ronald V. Robertson, Spokane, Wash.; **Honorary President:** Oscar Rennebohm, Madison, Wis.; **1st Vice-President:** Robert J. Gillespie, St. Joseph, Mich.; **2nd Vice-President:** John J. Dugan, New Haven, Conn.; **Secretary:** William S. Apple, Washington, D.C.; **Treasurer:** Hugo H. Schaefer, Yonkers, N.Y.

HOUSE OF DELEGATES
Chairman: Grover C. Bowles, Memphis, Tenn.; **Vice-Chairman:** John G. Adams, Pittsburgh, Pa.; **Secretary:** William S. Apple, Washington, D.C.

COUNCIL
Chairman: George F. Archambault (1962), Bethesda, Md.; **Vice-Chairman:** Louis J. Fischl (1963), Oakland, Calif.; **Secretary:** William S. Apple (1962), Washington, D.C.; Roy A. Bowers (1963), Newark, N.J.; Grover C. Bowles (1961), Memphis, Tenn.; Troy C. Daniels (1961), San Francisco, Calif.; John J. Dugan (1961), New Haven, Conn.; J.H.F. Dunning (1961), Baltimore, Md.; Robert P. Fischelis (1962), Washington, D.C.; Robert J. Gillespie (1961), St. Joseph, Mich.; John A. MacCartney (1961), Detroit, Mich.; Howard Newton (1961), Boston, Mass.; Ronald V. Robertson (1961), Spokane, Wash.; Linwood F. Tice (1963), Philadelphia, Pa.; Hugo H. Schaefer (1962), Yonkers, N.Y.; Leroy A. Weidle, Jr. (1962), St. Louis, Mo.

SECTION OFFICERS
Section on Education and Legislation: Chairman: Paul A. Pumpian, Milwaukee, Wis.; **Secretary-Treasurer:** Cecil P. Headlee, Indianapolis, Ind.; **Section on Historical Pharmacy: Chairman:** L.D. Lockie, Buffalo, N.Y.; **Secretary:** Donald T. Meredith, Kalamazoo, Mich.; **Section on Industrial Pharmacy: Chairman:** Paul R. Rasanen, North Chicago, Ill.; **Secretary:** Earl A. Kimes, Philadelphia, Pa.; **Section on Military Pharmacy: Chairman:** Vernon O. Trygstad, Washington, D.C.; **Secretary-Treasurer:** Capt. Claude V. Timberlake, Washington, D.C.; **Section on Pharmaceutical Economics: Chairman:** Richard L. Hull, Philadelphia, Pa.; **Secretary:** Robert Evanson, Lafayette, Ind.; **Pharmacy Student Section: Chairman:** Garrett Swenson, Pittsburgh, Pa.; **Secretary-Treasurer:** Barbara Bell, Chapel Hill, N.C.; **Section on Practical Pharmacy: Chairman:** F.V. Lofgren, Austin, Tex.; **Secretary-Treasurer:** P.F. Belcastro, Lafayette, Ind., **Scientific Section: Chairman:** Walter P. Charnicki, Lincoln, Nebr.; **Secretary-Treasurer:** R.C. Anderson, Indianapolis, Ind.

WOMEN'S AUXILIARY
President: Miss Thea Gesoalde, Great Neck, N.Y.; **1st Vice-President:** Mrs. William Prout, Charleston, S.C.; **2nd Vice President:** Mrs. Elmer Plein, Seattle, Wash.; **Secretary:** Mrs. Lee Worrell, Ann Arbor, Michigan; **Treasurer:** Mrs. Clifton Miller, Fargo, N.D.

This Journal is the official monthly publication of the American Pharmaceutical Association, dedicated to the elevation and unification of the profession of pharmacy through communication of authoritative, scientific, professional and cultural information. It is devoted to the education of pharmaceutical practitioners, and it functions as the professional voice of pharmacy, directed to all members of the profession of pharmacy in education, government, industry, and professional practice.

Journal of the

American Pharmaceutical Association

Vol. NSI, No. 3 March 1961

For, By and Of Pharmacists 147 editorial
Health Consultant to the Community 148 Michael Iannarone
Source of Information to the Physician 151 Marvin L. Miller
Unfilled Prescriptions in Your Community 155 Robert W. Hammel, Norman A. Campbell, Paul O. Williams
Extemporaneous Enteric Coating 158 E.L. Parrott
Double-Pestle Action 160 Loren C. MacKinney
Preparations of Ophthalmic Solutions 162 Kurt Kleinmann and C. Lee Huyck

Featurettes

Polio Program 140
Proposed Changes in Constitution and By-Laws 157
Jay Arnette 171 Harold D. Powell
Big Move 184

Departments

Advertising Index 194
APhA Handy Drug Reference 188
Calendar of Events 138
Federal Spotlight 145
Legal Blotter 172
Members 187
Pharmaceutical Postline 136
Pharmacy Today 174
Women's Auxiliary 186

The Journal of the American Pharmaceutical Association is published monthly by the American Pharmaceutical Association at 20th and Northampton Streets, Easton, Pennsylvania.

Offices—Editorial, Advertising and Subscription Offices: 2215 Constitution Avenue, N.W., Washington 7, D.C. Publication Office: 20th and Northampton Streets, Easton, Pennsylvania.

Annual Subscription—United States and foreign, $10.00 a year; single copies, $1.00. Combined rate with Journal of Pharmaceutical Sciences (also published by the American Pharmaceutical Association), $20.00. Members of the American Pharmaceutical Association receive the Journal of the American Pharmaceutical Association each month as a part of their annual membership dues.

Claims—Missing numbers will not be supplied if claims are received more than 60 days after the date of the issue, or if loss was due to failure to give notice of change of address. The Association cannot accept responsibility for foreign delivery when its records indicate shipment has been made.

Change of Address—Members and subscribers should notify at once both the Post Office and the American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington 7, D.C., of any change of address. Second class postage paid at Easton, Pa., and additional mailing offices.

© *Copyright 1961, American Pharmaceutical Association, 2215 Constitution Ave., N.W., Washington 7, D.C.*

Pharmaceutical Postline

'excellent job'

Sir:

I enjoyed so much the editorial in regard to international health published in the December issue of the JOURNAL of the AMERICAN PHARMACEUTICAL ASSOCIATION. It's an excellent job.

As a pharmacist, I am, of course, proud of the role which our profession has been playing in the Project HOPE program. I know that it will continue and I'll certainly remind people of what we have been doing.

Hubert H. Humphrey
United States Senate

Editor's Note: Contributions to Project HOPE are still being received. Have you sent your contribution?

'publication is invaluable'

Sir:

I am very excited about your March 1960 issue of the JOURNAL of the AMERICAN PHARMACEUTICAL ASSOCIATION.

This issue is without a doubt the finest source book on poison prevention that we have even heard of to date. This publication is invaluable to us in our program (St. Louis City-County Accident Prevention Program).

I would like everyone on the staff of our accident prevention program to have a copy of this booklet and to be thoroughly familiar with it.

Ronald C. Tess
St. Louis, Missouri

'practical side too'

Sir:

I enjoy your publication but find it slightly on the college level. We who have many years behind us are looking to you for some practical side too.

Rudolph Jarabak
East Chicago, Indiana

'highly informative'

Sir:

I have just finished reading the January issue of your publication and found it highly informative. It contains valuable information to most people in pharmacy. My congratulations to you for a job well done.

Moe Weiss
Brooklyn, New York

appreciate directory

Sir:

I just wanted to express my personal appreciation for the directory of the 743 organizations of pharmacy which you published as a part of the January issue of the JOURNAL of the AMERICAN PHARMACEUTICAL ASSOCIATION.

This splendid service will be of value to all of us throughout the year. I trust it will become an annual feature of your splendid journal.

With appreciation for the professional job you are doing.

Richard A. Velz
Richmond, Virginia

Sir:

I wish to compliment the AMERICAN PHARMACEUTICAL ASSOCIATION for compiling a directory issue of pharmaceutical organizations.

Louis P. Jeffrey
Buffalo, New York

Sir:

You have prepared a very fine and useful directory, which will be appreciated by many.

H. George Wolfe
Rahway, New Jersey

Editor's Note: Additional reprints of the Directory can be obtained at APhA headquarters if you order soon while they last. Cost, $1.00 per copy.

'a stronger APhA'

Sir:

A very disturbing incident concerning the pharmacists of Northern California has come to my attention through various pharmaceutical journals. It is not this particular case in point that motivated me to write this letter but the impression that evolves from the entire situation. The Department of Justice reduces the employed pharmacist to a mere clerk who handles a simple commodity and the pharmacy owner to a proprietor of such goods.

As an employee of a professional pharmacy, I would like to list some of the duties performed:

1. Constant answering of questions about drugs for physicians who are unable to find the time to keep up with the bombardment of new drugs and see patients as well.
2. Serve as a screen between the patient and physician through his prescription, as doctors are only human and thus not infallible.
3. Take the many precautionary measures to fill prescriptions accurately.
4. Inform the patient of any peculiarity the drugs they receive may possess in the nature of side effects or of proper storage.
5. The proper storage of those pharmaceuticals needing particular care.

Are these the duties of a common clerk? Have I gone through four years of intense training and study to be classified as such? The particular problem that the pharmacists of Northern California face confront all pharmacists. The path that the pharmacist must take leads to one end—a greatly empowered pharmaceutical organization to speak for the pharmacist, a stronger APhA.

I want to see the profession of which I am a member elevated to the status it rightly deserves. What other way can this be done than through a healthy and strong professional organization and what other organization could unite all the pharmacists in the nation than APhA?

Alfred F. Marton
Chicago, Illinois

'to raise the standards'

Sir:

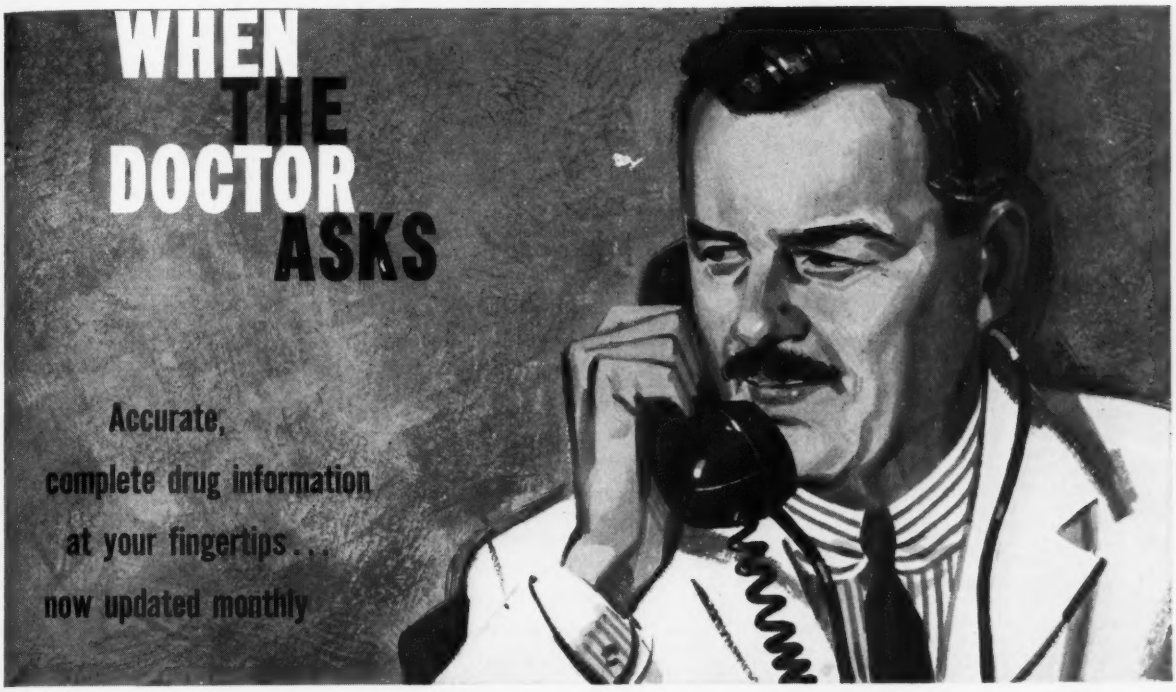
Attached is my check for membership in the AMERICAN PHARMACEUTICAL ASSOCIATION.

Every practicing pharmacist who is eligible in the United States should belong to this ASSOCIATION and should support it actively in its endeavor to raise the standards and ethics of the profession.

I have a son who is a senior at the University of Florida school of pharmacy and I sincerely hope that when he enters into the practice of pharmacy, many of the ills that beset the profession today will be far along a way to a rightful solution that will make him proud of his decision to enter this profession.

I also realize this can only be accomplished through full support both from financial and active work by a majority of the members of an organization such as the AMERICAN PHARMACEUTICAL ASSOCIATION.

John M. Carter
Sarasota, Florida



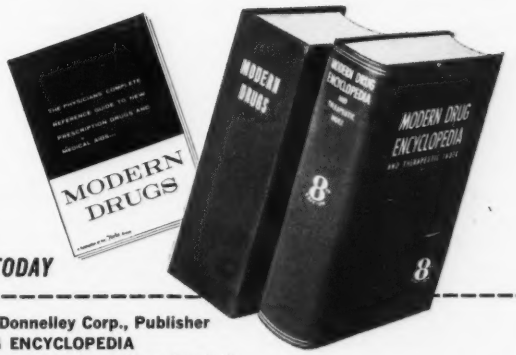
NEW for 1961–8th EDITION–MODERN DRUG ENCYCLOPEDIA

MODERN DRUG ENCYCLOPEDIA and its monthly supplements provide quick, accurate answers about new and established ethical pharmaceuticals. No cumbersome files to keep up-to-date . . . just a single compact bound volume and a compact binder for monthly supplements.

NEW 8th EDITION—Describes principal ethical products of 125 manufacturers who distribute nationally. Hundreds of product descriptions give *all* the pertinent information—composition, dosage, etc. Cross Indexing—General (including generic names), Manufacturers' and Therapeutic Indices—makes vital information instantly available.

and MODERN DRUGS—The supplement issued MONTHLY—Describes all the new important products as soon as marketed. Cumulative indices in each issue. Binder to keep all 24 issues together.

25 YEARS OF PUBLICATION prove MODERN DRUG ENCYCLOPEDIA and MODERN DRUGS Supplement to be indispensable. Is a required text in most pharmacy colleges; in some states is required in every pharmacy.



ORDER YOUR MODERN DRUG ENCYCLOPEDIA TODAY

The Reuben H. Donnelley Corp., Publisher
MODERN DRUG ENCYCLOPEDIA
466 Lexington Avenue, New York 17, N.Y.

☐ Enclosed is $17.50* for my 8th Edition of MODERN DRUG ENCYCLOPEDIA and Therapeutic Index and the Monthly Supplement—MODERN DRUGS.

☐ Enclosed also is $3.50 for binder for MODERN DRUGS Monthly Supplement.

For delivery in N.Y.C., please include 3% Sales Tax with remittance.

Name_____

Address_____

City_____ Zone_____ State_____

I am a ☐ Physician ☐ Nurse ☐ Pharmacist ☐ Pharmacy Student

Other than above_____

U.S.A. $17.50 Foreign $23.50 (U.S. Currency)
Please make checks payable to The Reuben H. Donnelley Corporation

*Includes 2-year supplementary service at $5.00 per year ($6.00 Foreign)

Calendar of Events

MARCH

1–31 Red Cross Month
2–Apr 2 Easter Seal Appeal
8–10 Pharmaceutical Manufacturers' Assn. medical section, Ponte Vedra Club, Ponte Vedra, Fla.
12 Wisconsin APhA Seminar (Wisconsin APhA Branch and Univ. of Wisconsin Ext. Services in Pharmacy), Alioto's, Milwaukee, Wis.
13–14 District No. 6, NABP-AACP meeting, Houston, Tex.
13–16 National Health Forum and annual meeting. National Health Council, Waldorf-Astoria, New York, N.Y.
15–18 Pharmaceutical Wholesalers Assn. convention, Las Vegas, Nev.
19–21 Missouri Pharmaceutical Assn. annual convention, Hotel Connor, Joplin, Mo.
19–21 Iowa Pharmaceutical Assn. annual convention, Hotel Savery, Des Moines, Iowa
21–30 American Chemical Society national meeting, St. Louis, Mo.
22–23 Pharmacy Management Conference (Univ. of Texas Ext. Services in Pharmacy), Driscoll Hotel, Corpus Christi, Tex.
22–24 American Nurses Assn. conference on legislation Sheraton-Park Hotel, Washington, D.C.
26–28 Kansas Pharmaceutical Assn. annual convention, Hotel Broadview, Wichita, Kan.
26–30 National Science Teachers Assn. meeting, Chicago, Ill.

APRIL

1–30 Cancer Control Month
5–7 National Council on Alcoholism annual meeting, Shoreham Hotel, Washington, D.C.
5–8 Clinical Society, U.S. Public Health Service, annual meeting, USPHS Hospital, Lexington, Ky.
9–11 Nebraska Pharmaceutical Assn. annual convention, Hotel Fontenelle, Omaha, Nebr.
10–12 American Academy of Pediatrics spring session, Sheraton-Park Hotel, Washington, D.C.
10–12 Assn. of Schools of Public Health annual meeting, Harvard Univ., Boston, Mass.
10–14 National League for Nursing biennial convention, Cleveland, Ohio
11–13 Industrial Medical Assn. industrial health conference, Biltmore Hotel, Los Angeles, Calif.
12 Pharmacy's Public Health Forum (Brooklyn College of Pharmacy Alumni Assn.), Long Island Univ., Brooklyn, N.Y.
12–14 National Society for the Prevention of Blindness annual conference, Barbizon Plaza Hotel, New York, N.Y.
16–18 North Carolina Pharmaceutical Assn. annual convention, Hotel King Cotton, Greensboro, N.C.
16–19 California Pharmaceutical Assn. annual convention and trade show, Ambassador Hotel, Los Angeles, Calif.
17–19 New Mexico Pharmaceutical Assn. annual convention, Western Skies Hotel, Albuquerque, N.M.
18 National Social Welfare Assembly spring meeting, Biltmore Hotel, New York, N.Y.
19 Rhode Island Pharmaceutical Assn. annual meeting, Sons of Italy Hall, Providence, R.I.
19 Texas Southern Univ. school of pharmacy annual seminar, Houston, Tex.
21 Parenteral Drug Assn. scientific meeting, Edgewater Beach Hotel, Chicago, Ill.
23–28 American Pharmaceutical Assn. annual meeting, Hotel Sherman, Chicago, Ill.
23–25 American Association of Colleges of Pharmacy
28–29 American College of Apothecaries
23–27 American Society of Hospital Pharmacists
24–25 Metropolitan Drug Assn. Secretaries
24–25 National Association of Boards of Pharmacy
22–23 National Conference of State Pharmaceutical Association Secretaries
24–26 Animal Health Institute annual meeting, Mayflower Hotel, Washington, D.C.
26–29 American College Health Assn. meeting, Gannett Clinic, Cornell Univ., Ithaca, N.Y.
27–28 Eastern States Health Education Conference, New York Academy of Medicine, New York, N.Y.
30–May 3 Pharmaceutical Manufacturers' Assn. annual meeting, The Greenbrier, White Sulphur Springs, W.Va.
30–May 6 Mental Health Week

MAY

1 Child Health Day
7–9 Arizona Pharmaceutical Assn. annual convention, Highway House, Tucson, Ariz.
7–13 National Hospital Week
8–10 American National Red Cross annual convention, Cincinnati, Ohio
9–10 Seminar on Modern Pharmacy, Butler Univ. school of pharmacy, Indianapolis, Ind.
9–11 Oklahoma Pharmaceutical Assn. annual convention Hotel Skirvin, Oklahoma City, Okla.
9–11 Toilet Goods Assn. convention, Waldorf-Astoria, New York, N.Y.
10 Tenth Annual Pharmaceutical Conference, Rutgers Univ. College of Pharmacy, New Brunswick, N.J.
10–13 National Science Fair-International, Kansas City, Mo.
14–17 Proprietary Assn. annual meeting, The Greenbrier, White Sulphur Springs, W.Va.
14–19 National Conference on Social Welfare annual forum, Minneapolis-St. Paul, Minn.
15–22 Foot Health Week
16–17 Arkansas Pharmaceutical Assn. annual convention, Hotel Marion, Little Rock, Ark.
17–20 Hawaiian Pharmaceutical annual convention, Reef Hotel, Waikiki, Honolulu, Hawaii
21–23 Illinois Pharmaceutical Assn. convention, Leland Hotel, Springfield, Ill.
21–23 Utah Pharmaceutical Assn. annual convention, Hotel Utah, Salt Lake City, Utah
21–24 Florida Pharmaceutical Assn. annual convention, Hotel Americana, Bal Harbour, Fla.
21–26 National Tuberculosis Assn. annual meeting, Netherland-Hilton Hotel, Cincinnati, Ohio

JUNE

4–6 North Dakota Pharmaceutical Assn. annual convention, Hotel Plainsman, Williston, N.D.
4–6 Wyoming Pharmaceutical Assn. convention, Sheridan, Wyo.

American Pharmaceutical Assn. annual meeting

1962 March 25–30, Las Vegas, Nev.
1963 May 13–18, Miami Beach, Fla.

4–7 National Industrial Pharmaceutical Research annual conference, King's Gateway, Land O' Lakes, Wis.
4–8 New Jersey Pharmaceutical Assn. annual convention, Hotel Traymore, Atlantic City, N.J.
5–8 New York Annual Health Conference, Community War Memorial, Rochester, N.Y.
6–8 Alabama Pharmaceutical Assn. annual convention, Edgewater Gulf Hotel, Edgewater Park, Miss.
11–14 Virginia Pharmaceutical Assn. annual convention, Hotel John Marshall, Richmond, Va.
11–14 Georgia Pharmaceutical Assn convention, Hotel Biltmore, Atlanta, Ga.
11–16 New York Pharmaceutical Assn. convention, Grossinger's, Grossinger, N.Y.
12–14 Colorado Pharmacal Assn. convention, Hotel Colorado, Glenwood Springs, Colo.
12–14 Louisiana Pharmaceutical Assn. convention, Washington-Youree Hotel, Shreveport, La.
18–20 Connecticut Pharmaceutical Assn. annual convention, Banner Lodge, Moodus, Conn.
18–20 Delaware Pharmaceutical Assn. convention, Hotel Henlopen, Rehoboth, Del.
18–20 Massachusetts Pharmaceutical Assn. convention, New Ocean House, Swampscott, Mass.
18–20 South Dakota Pharmaceutical Assn. convention, Sheraton-Johnson Hotel, Rapid City, S.D.
18–21 Pacific Northwest International Pharmaceutical Convention (Wash., Ore., Idaho and Brit. Col. participating), Olympic Hotel, Seattle, Wash.
18–21 Ohio Pharmaceutical Assn. convention, Sheraton Cleveland Hotel, Cleveland, Ohio
18–21 South Carolina Pharmaceutical Assn. convention, Poinsett Hotel, Greenville, S.C.
19–21 Mississippi State Pharmaceutical Assn. annual convention, Edgewater Gulf Hotel, Edgewater Park, Miss.
19–21 Tennessee Pharmaceutical Assn. convention, Peabody Hotel, Memphis, Tenn.
20–22 Indiana Pharmaceutical Assn. annual convention, Severin Hotel, Indianapolis, Ind.
20–22 Michigan Pharmaceutical Assn. convention, Occidental Hotel, Muskegon, Mich.
21–22 District of Columbia Pharmaceutical Assn. convention, Mayflower Hotel, Washington, D.C.
23 Parenteral Drug Assn. scientific meeting, Warwick Hotel, Philadelphia, Pa.
24–25 American Diabetes Assn. annual meeting, Commodore Hotel, New York, N.Y.
24–25 American College of Apothecaries eastern regional conference, Toronto, Canada.
24–26 Montana Pharmaceutical Assn. convention, Hotel Rainbow, Great Falls, Mont.
25–27 Rhode Island Pharmaceutical Assn. annual convention, Mayflower Hotel, Plymouth, Mass.
26–30 American Medical Assn. annual meeting, Statler-Hilton Hotel, New York, N.Y.

INTERNATIONAL

APRIL

24–28 Health Congress, The Royal Society of Health, Blackpool, England

JUNE

3–15 International Medical and Health Exhibition, Florence, Italy

AUGUST

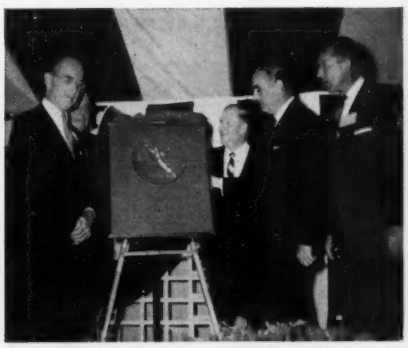
22–25 International Pharmacological meeting (first), Stockholm, Sweden

...In Quest of Freedom from Disease

PFIZER'S NEW MEDICAL RESEARCH LABORATORIES DEDICATED TO SCIENTIFIC RESEARCH IN THE SERVICE OF MEDICINE AND MANKIND ON OCTOBER 6, 1960 IN GROTON, CONNECTICUT

"In the world of medicine, all of us have a responsibility greater than in most other worlds, for the simple reason that what we produce in materials and services may determine whether a person lives or dies. This is a grave responsibility. It means that strong leadership and high principles are essential ingredients of healthy growth. And healthy growth is further dependent on the proper use of the wealth it creates...."

From the address by Irvine H. Page, M.D., Director of Research, Cleveland Clinic Foundation, at ceremonies of October 6, 1960 held in dedication of the Pfizer Medical Research Laboratories



The 400 scientists and supporting technical and administrative staff in the microbiological, macrobiological, chemical and biochemical research units of the Groton laboratories are part of the world-wide Pfizer research team. This international research project numbers 1,000 men and women who, through organized knowledge, help to create new and better drugs ...all in quest of freedom from disease.

Science for the world's well-being™

Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc.
Brooklyn 6, New York

Robert E. Abrams, Dr. Albert B. Sabin and Ralph S. Tilly (left to right) stop for a brief discussion during the polio conference in Atlanta, Georgia.

pharmacy co-operation in polio control program

Four poliomyelitis control goals and recommendations for achieving those goals came out of a two-day conference of the surgeon general's committee on poliomyelitis control including health and welfare organizations. Representing APhA at the conference, January 23–24, at the Public Health Service's Communicable Disease Center in Atlanta, Georgia, were Robert E. Abrams, ACA secretary, and Ralph S. Tilly, member of APhA's committee on professional relations.

Abrams and Tilly presented several constructive suggestions to the committee as a result of a preliminary meeting of the pharmacy advisory commission on poliomyelitis control held in Washington, D.C., January 16. Attending this meeting were Abrams, Robert M. Leonard, AACP representative, Joseph A. Oddis, ASHP secretary, Joseph Cohen, MDAS representative, James O. Hubbard, Jr., NCSPhAS representative, and Ralph R. Rooke, NARD representative to the surgeon general's committee on polio control.

Because it was the consensus of the Atlanta conference that no oral polio vaccine will be available for the 1961 polio season, APhA plans to call another meeting of the pharmacy advisory commission to develop plans for co-operating with medicine at the county and community level in promoting the recommended program of fuller use of the currently available Salk vaccine.

The meeting will also discuss the four goals and recommendations of the conference. The four goals indicated were—

1. Eradication of polio from the population
2. Prevention of endemic outbreaks
3. Prevention of epidemics
4. Control of epidemics

To achieve these goals the committee recommended that—

1. Immediate steps be taken to intensify drives for vaccination with Salk vaccine.
2. Priorities for immunization be suggested which include children under age six as the primary goal and children under 10 and parents of young adults as the second most important group.
3. All immunization be handled under medical supervision.
4. Approval of the dosage schedule for Salk immunization similar to that now in use, except the third dose should be administered before the the polio season even though seven months had not elapsed between doses.
5. Communities conduct periodic evaluation of poliomyelitis immunization status.
6. The national poliomyelitis surveillance program be continued and expanded.
7. Behavioral studies be made to determine why people do not utilize the vaccine more extensively.
8. Research in the field of inactivated virus vaccines and oral vaccines be intensified.
9. The Public Health Service should continue to make every effort to encourage the early production and ready availability of an oral polio vaccine.
10. If the first available supplies of oral polio virus vaccine should be limited in amount, then priorities for use should be first—epidemic control, investigations and community studies; second—immunization of infants and preschool children; and third—selected areas of population.
11. The use of vaccines, Salk or oral, when available should be intensified in the face of an epidemic.
12. The Public Health Service should maintain an epidemic reserve of oral polio virus vaccine.

Pharmacy advisory commission on polio control met in Washington, D.C. to formulate proposals and plans. (Seated left to right) NARD representative to surgeon general's conference Ralph R. Rooke reviews plans with APhA Secretary Apple, while Raymond J. Moyer, Jr. and Robert Abrams look on. Standing left to right are Joseph A. Oddis, Joseph Cohen, James O. Hubbard, Jr. and Robert M. Leonard.

When hemorrhoids complicate pregnancy...

PHYSICIANS USUALLY PRESCRIBE **ANUSOL®** OR **ANUSOL-HC®**

For Anorectal Comfort In Minutes

Supplied: Anusol Hemorrhoidal Suppositories, 6's, 12's and 24's. Buy a dozen and save 10%, inclusive of cash. Anusol-HC Suppositories, boxes of 12.

You'll be receiving an increased demand for Anusol as well as the products noted below. They're the ones featured now in Warner-Chilcott's detailing and journal program to your physicians.

WARNER-CHILCOTT'S PROMOTION LINE-UP FOR MARCH-APRIL

PROLOID® Buy a 500 for same price as four 100's.

NARDIL® The effective anti-depressant. Bottles of 100 tablets.

PERITRATE® SUSTAINED ACTION Buy a 500 for the price of four 100's.

GELUSIL® Tablets and Liquid. Buy 12, save 10%, inclusive of cash.

MANDELAMINE® HAFGRAMS® 500's and 1000's are your best buy.

NEW!
AZO-MANDELAMINE® The new urine-specific analgesic/antibacterial. Bottles of 100 tablets.

WARNER CHILCOTT
MORRIS PLAINS, N.J.

DJ12

WARNER-CHILCOTT—SERVING THE MEDICAL PROFESSION FOR 105 YEARS

SOME OF THOSE SUPERMARKET MEDICINE MEN ARE AT IT AGAIN

Now they're playing doctor with margarines.

So let's look at the facts.

On the next 2 pages you can read the same message that is appearing in leading medical journals, to make sure doctors know the facts and are not confused by any misleading claims of the supermarket medicine men.

We're telling these facts in support of Emdee Margarine, *the margarine sold in drugstores.*

If you would like reprints of this message, just drop us a card, or ask your Pitman-Moore representative.

PITMAN-MOORE COMPANY

DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA

let's stop playing fast and loose with linoleic acid

There seems to be no doubt that *linoleic acid is the key factor* in dietary reduction of serum cholesterol. To reduce serum cholesterol, linoleic acid, the principal *poly*unsaturated fatty acid in edible vegetable fats, must *replace* some of the saturated and *mono*unsaturated fatty acids in the diet, not merely be added to the total intake.

This concept is clearly stated in the following quotation from a recent JAMA editorial: "It is accepted generally that specific alteration in the diet will lower the concentration of cholesterol in the blood. The most effective results to date have been achieved by increasing consumption of polyunsaturated fatty acids, particularly linoleic acid." "A particular regimen will be effective only if polyunsaturated fatty acids are responsible for an appreciable percentage of the total fat calories. That is, they must replace rather than supplement some of the saturated fats and oils already in the diet."[1]

In spite of this clear and unbiased statement, the advertising of some margarines seems designed to mislead physicians and their patients by capitalizing on the publicity given to corn oil as the principal source of linoleic acid. The following ambiguous claims are typical:

According to the headline:

The margarine is made of 100% Corn Oil. Buried in the body copy are the words partially hydrogenated.

Misleading because:

The partial hydrogenation has largely converted linoleic acid into saturated fats and into monounsaturated oleic acid, which has been observed to have no effect on serum cholesterol.

According to the headline:

Some claim to have twice the corn oil nutritional benefit of any other leading spread.

Misleading because:

Such a statement obviously implies that this margarine has twice as much linoleic acid, hence greater cholesterol-lowering effect. The truth is that you can buy a margarine with significantly higher linoleic acid content in drugstores.

And so it goes. Literature sent to physicians and journal ads to the profession have been equally misleading. For example, *references being cited refer to clinical studies with a totally different product.* No wonder the author of the editorial cited above felt compelled to warn physicians about "widespread misinformation in this field!"

We don't like such misleading advertising, and we don't use it to promote Emdee Margarine. We're content to deal in facts:

- **Emdee Margarine contains significantly more linoleic acid than other corn oil margarines currently marketed—and contains significantly less of the unnatural trans isomer forms of fatty acids.**
- **Emdee Margarine—and only Emdee Margarine—was used in clinical evaluation studies, even though others now cite the references.**
- **Emdee Margarine—and only Emdee Margarine—has published reports of its value in cholesterol-lowering diets, including articles in JAMA[2], Geriatrics[3], and American Journal of Clinical Nutrition[4].**

Corn oil margarines are *not* alike. They vary greatly in percentage of the active ingredient—linoleic acid. Of them all, Emdee Margarine has far more linoleic acid. It's true that our patented linoleic acid-sparing process makes Emdee Margarine more expensive. But, it's *worth more* when you want your patient's serum cholesterol to go down.

Although the misleading promotion of some margarines may confuse some of your patients, we feel certain that it will not deceive the critical physician —and that you will continue to depend, as you always have, on the facts and on your own clinical evaluation of your patient's needs.

PITMAN-MOORE COMPANY
DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA

EMDEE®
margarine

References: 1. Pollack, H.: J.A.M.A. *172*:1165 (Mar. 12) 1960. 2. Boyer, P. A.; Lowe, J. G.; Gardier, R. W., and Ralston, J. D.: J.A.M.A. *170*:257 (May 16) 1959. 3. Terman, L. A.: Geriatrics *14*:111 (Feb.) 1959. 4. Jolliffe, N.; Rinzler, S. H., and Archer, M.: Am. J. Clin. Nutrition *7*:451 (July-Aug.) 1959.

special process protected by
U. S. Patent No. 2,890,959

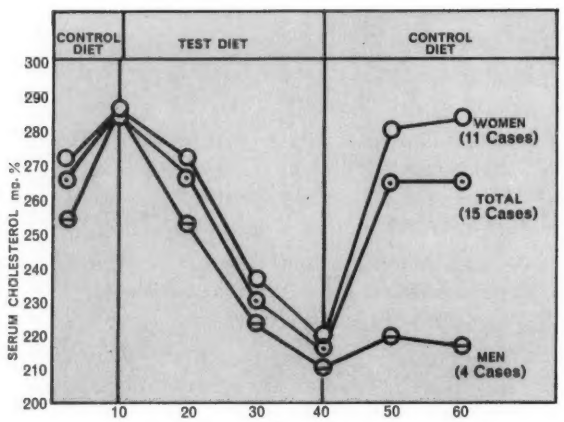
(SEE OTHER SIDE FOR ADDITIONAL INFORMATION ON EMDEE MARGARINE)

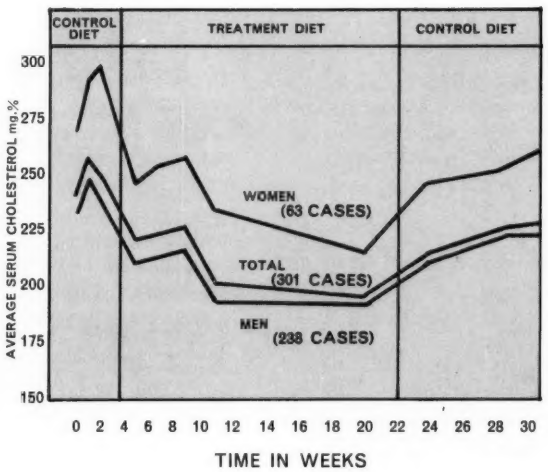
Corn oil margarines are *not* alike in linoleic acid content and, therefore cannot all be of equal value in lowering serum cholesterol. Emdee Margarine contains *significantly more linoleic acid* than any other corn oil margarine currently marketed. Emdee Margarine is the *only* margarine with published scientific reports of its value in reducing serum cholesterol.

Serum cholesterol goes down

when Emdee Margarine is substituted for spreads and shortenings containing more saturated or hydrogenated fatty acids.

Emdee Margarine in place of other spreads and shortenings has been shown to be a practical way to lower serum cholesterol without complicating or creating a weight reduction problem. Emdee provides effective levels of linoleic acid. In clinical studies, patients accepted Emdee Margarine without reservation. Results of these studies indicate Emdee's effectiveness:





"Average serum cholesterol values were noticeably reduced during the test diet, becoming statistically significant at the end of the second ten-day period and showing increasing significance at the end of the third ten-day period."[1]

"In a nine-month study of over 300 inpatients in a state institution, it was found that a regimen employing a nonhydrogenated corn oil margarine (Emdee Margarine) for other solid fats as the principal dietary alteration was effective in achieving and maintaining a reduction in blood cholesterol levels."[2]

References: 1. Terman, L. A.: Geriatrics *14*:111 (Feb.) 1959. 2. Boyer, P. A.; Lowe, J. G.; Gardier, R. W., and Ralston, J. D.: J.A.M.A. *170*:257 (May 16) 1959.

When You Want to Lower Blood Cholesterol

EMDEE® *margarine*

PITMAN-MOORE COMPANY
DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA

To protect flavor and texture, Emdee Margarine is packaged in cans and kept under constant refrigeration. The linoleic acid-sparing manufacturing process is covered by U. S. Patent No. 2,890,959.

Federal Spotlight

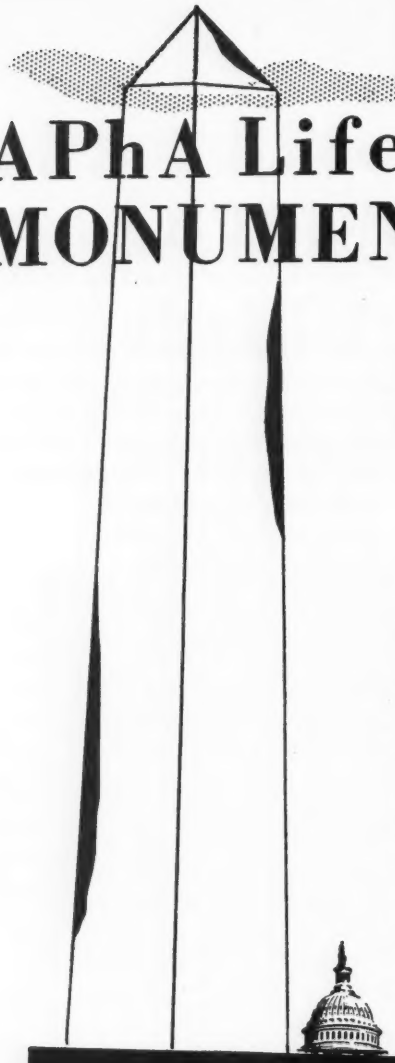
Message from the President—The long awaited message from President Kennedy on health and hospital care was presented to Congress on February 9. Under the heading of health insurance for the aged, the President recommended "enactment of a health insurance program under the social security system that will provide" inpatient hospital services up to 90 days for a single illness (all costs above $10 per day for the first 9 days and full costs for the remaining 81 days); skilled nursing home services up to 180 days; hospital outpatient clinic diagnostic services for all costs in excess of $20 and community visiting nurse services "for a limited period of time." Senator Javits promptly labeled the administration proposal as "inadequate and unsatisfactory" by failing to include the "millions over 65 not covered under social security" and failing to make any "provision for voluntary health plans."

Senate receives health insurance for aged bills—On February 13 Senator Anderson with the support of 11 other senators introduced S. 909 described as "a bill to implement the President's proposal" and "a companion bill to H.R. 4222." On the very same day Senator Javits with the support of 8 other senators introduced S. 937 described as a "bill to provide for a program of federal matching grants to the states to enable the states to provide health insurance for individuals aged 65 or over at subscription charges such individuals can pay."

The administration proposal defines the term "drugs and biologicals" as "are included in the United States Pharmacopoeia, National Formulary, or 'New and Non-Official Remedies'" while the Javits bill defines drugs as "those medicines which are prescribed by a physician." The administration bill provides for the cost of "drugs and biologicals" for inpatient hospital and skilled nursing home patients (but not for "home health service") in accordance with the total prescribed benefits. According to the Javits proposal, an individual state's typical maximum benefits under the long-term illness plan could include 80 percent of the cost of prescribed drugs up to $350 in any enrollment year.

Kefauver hearings—The Senate approved an appropriation of $450,000 for the antitrust and monopoly subcommittee during the current year after Senator Estes Kefauver explained that his committee is "now preparing a very comprehensive bill which would help to make the ethical drug industry more competitive and help straighten out several situations with reference to drugs, both in the Food and Drug Administration and in advertising insofar as the Federal Trade Commission is concerned." Paul Rand Dixon, chief counsel for the subcommittee during the previous drug hearings, has now been appointed by President Kennedy to head the Federal Trade Commission.

APhA Life Declares MONUMENTAL DIVIDEND



EFFECTIVE MARCH 1, 1961, all APhA Life policyholders will receive the following additional insurance purchased by APhA from dividends donated by insured members:

Attained Age	One-Year Term Paid-Up Insurance
Under 30	*30% of face amount of policy*
30 - 39	*20% of face amount of policy*
40 and over	*15% of face amount of policy*

If you are under age 30, the life insurance's value is increased from $10,000 to $13,000, and the accidental death benefit to $26,000. For those aged 30-39, the life insurance is raised to $12,000, and the accidental death benefit, to $24,000; and if you are age 40 or over, the life insurance and accidental death benefit are increased to $11,500 and $23,000, respectively.

Until further notice, these increases will apply immediately to all new applicants accepted for insurance. Policyholders under age 36 already have 20% additional insurance due to expire June 1, 1961. The new dividend will extend 30%* more insurance on insureds under age 30, and 20% additional insurance on those 30-36, to March 1, 1962.

To take advantage of this monumental dividend, complete the application below and mail it to The Minnesota Mutual Life Insurance Co., Victory Square, St. Paul 1, Minn.

APPLICATION FOR APhA LIFE INSURANCE

To The Minnesota Mutual Life Insurance Company for APhA Term Life Insurance Plan automatically convertible to the Whole Life Paid-up at Age 90 Plan. (Please print or type all information.)

(1) Name .....

(2) Height..... (3) Weight.....

(4) Permanent address: Street.....

City..... Zone..... State.....

(5) Birthday (Day)..... (Month)..... (Year).....

(6) Premiums payable: ☐ Annually; ☐ Semi-annually

(7) Name of Beneficiary: .....

(8) Relationship.....

(9) Do you know of any impairment now existing in your health or physical condition? Yes..... No.....

(10) If "yes" give Particulars .....

(11) Have you consulted a physician for any illness during the past three years? Yes..... No.....

(12) If "yes" give particulars: .....

I HEREBY APPLY for the insurance described above. All dividends declared under this policy during the term insurance period are directed by me to be paid to the American Pharmaceutical Association as a gift from me.

INFORMATION in this application is given to obtain this insurance and is true and complete to the best of my knowledge and belief. The Company shall incur no obligation because of this application unless and until a policy is delivered to the Applicant and the first premium thereon is paid in full while the health or other conditions affecting insurability of the Applicant are as described in this application.

Date

Signature of Applicant

Editorial

. . . for, by and of pharmacists

■■ Qualifications for membership have been a perennial topic of discussion at AMERICAN PHARMACEUTICAL ASSOCIATION meetings.

In 1852 APhA membership was restricted to "pharmaceutists and druggists who shall have attained the age of 21 years, whose character, morally and professionally, is fair." Three years later, the ASSOCIATION explained that "every apothecary and druggist of good moral and professional standing, whether in business on his own account, retired from business or employed by another" was eligible for membership. Until 1867, membership in the ASSOCIATION was restricted exclusively to pharmacists.

It was in 1867 that membership qualifications were extended to include "those teachers of pharmacy, chemistry and botany who may be specially interested in pharmacy and materia medica." And, it was in 1905 that "editors and publishers of pharmaceutical journals" were officially added to those qualified for APhA membership. The list of qualified candidates continued to grow and in 1913 it included "official food and drug chemists, whether municipal, state or nation, and members of the scientific staffs of pharmaceutical houses." Finally, the list of persons qualified for APhA membership had become so cumbersome that the Constitution was revised in 1920 by deleting all references to specific persons other than "pharmacist" and substituting the phrase "and other persons interested in the progress of the science and art of pharmacy."

This provision of the ASSOCIATION By-Laws remained in effect until the language of the current Constitution and By-Laws was adopted in 1951.

A membership qualification proposal that would return the ASSOCIATION's active membership to that of a national professional society of pharmacists—as was intended by the founders of APhA—will be considered at the 1961 Chicago convention. The proposed recommendations for membership originated in the House of Delegates during the 1957 interim meeting. In response, the House called for a panel discussion on membership categories and qualifications to be presented at the 1958 Los Angeles convention.

Following the lively debate in Los Angeles, the House resolved that the committee on Constitution and By-Laws be directed to prepare and submit for action by the ASSOCIATION the necessary changes in the Constitution and By-Laws that would restrict future active members to pharmacists.

Amendments were introduced at a general session during the 1959 Cincinnati convention, but the House asked for a postponement of any final action so that a special committee could give the matter further study. At the 1960 Washington convention the special committee recommended that active status be reserved for registered or graduate pharmacists. The House of Delegates approved this and other membership qualifications which will be considered at the general session of the 1961 Chicago convention (*see page 157*).

Since 1852, individuals other than pharmacists have made invaluable contributions to the profession of pharmacy and the ASSOCIATION. By recommending an associate membership category, the House of Delegates has wisely provided for the future of such interested persons. The few hundred nonpharmacists who are presently active members will continue to enjoy privileges they have earned and because they are sincere thinking people, we believe that they will recognize that the proposed changes are consistent with the original objectives and in the best future interest of the ASSOCIATION. By completing the cycle and returning to our original qualifications for active membership, APhA can now take another important step to affirm beyond doubt that it has and always will be a national professional society for, by and of pharmacists.

by Michael Iannarone*

expanding role of the community pharmacist . . .

health consultant to the community

A pilot study conducted in New Jersey indicates that the public is accustomed to asking questions about health and provides evidence that the pharmacist serves as an educator, communicator and interpreter with regards to community health problems.

For almost 24 years, Michael Iannarone, associate professor of biological sciences, has been a member of the faculty at Rutgers University college of pharmacy. It was from Rutgers that he received his BS in 1937 and his MS in bacteriology in 1946. A registered pharmacist in New Jersey and New York, Iannarone serves as secretary-treasurer of the Northern New Jersey branch of APhA and as delegate to the House of Delegates. In addition to being a member of many scientific societies, pharmaceutical fraternities and organizations, he holds an inactive reserve commission in the U.S. Public Health Service, is executive member of the hospital and health council, serves as delegate to the health careers project committee of the New Jersey Public Health Association and has been elected a fellow to the American Public Health Association.

Public health has become the obligation not only of the state but equally so of the medical professions and the individual citizen. Public interest in health and medical matters is widespread and it confers an inescapable obligation upon all the public health professions in which pharmacy has a proper responsibility and a proper place.[1] There is evidence that pharmacists realize the delicate position they occupy in advising on health matters. Public health concepts are becoming more fully appreciated by pharmacists as knowledge vital to their understanding of community health problems. In view of this attitude a pilot study was made to determine that the pharmacist is—and may continually act as—a health consultant to the community.

This study was conducted in New Jersey by the Rutgers college of pharmacy with the co-operation of the New Jersey Board of Pharmacy. A two-page questionnaire was developed and mailed to pharmacy interns registered with the New Jersey Board of Pharmacy. The questionnaire was distributed so that each intern could record his own responses during a designated period of time—May 23–27, 1960 and June 1, 1960.† Since the New Jersey Board of Pharmacy requested this information it was clearly stated that all replies would in no way identify the store or the individual. As anticipated there was approximately a 90 percent response by the interns completing the entire project for the designated dates.

A very simple tabulation was made of the responses to determine the extent of inquiries asked by the patrons visiting the pharmacy. The replies represented stores located in 16 counties out of a total of 21 counties in the state of New Jersey. The majority of replies came from the Northern New Jersey area.

In the final analysis, this study indicated that the pharmacist is in an ideal position to disseminate health information to the public and knows without doubt when to refer his patrons to a medical practitioner. This interesting aspect suggests that the pharmacist has a "potential for service to the health team and to the public generally, which is not presently being wholly realized." There was clear evidence that the present day pharmacist considers over-the-counter diagnosing as dangerous and that this responsibility of prescribing should be done by a qualified medical practitioner.

"Your pharmacist works for better community health," the slogan used during Pharmacy Week and continued throughout the year, well exemplifies a target area where health information and education are available to the community at all times.

People usually don't believe in the reasons behind a slogan. They must be convinced that the "well informed pharmacist is the best single individual to disseminate information about health," whether it pertains to the individual, family, community, nation and the world or in terms of the past, present and future.

Thus, an informed public is the most effective weapon in the control of health problems. For it is only when every person understands the need for action that he will seek the periodic health check-up; the need for co-operating with health agencies; the advice of professional people.

The present day pharmacist should also be informed of the action being taken to solve these health problems, with attention focused upon his own responsibilities as a professional and the inter-relationship which exists among the different professions.

His attitude to both the individual and community at large should be of much concern. He should be interested in the promotion of health with a deep sense of service to others.

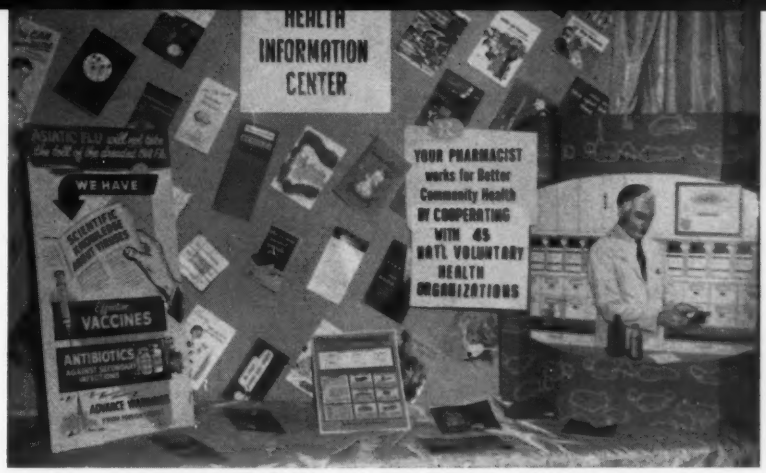
Pharmacy is making noteworthy progress in its dealings with the physi-

* Presented to the section on education and legislation at the APhA convention in Washington, August 19, 1960.

† A similar study was undertaken in October 1959. This study was limited to 100 pharmacies located in Northern New Jersey. In this study the registered pharmacist was asked to co-operate using the same questionnaire. Results are available from author of this paper.

cian, the nurse and the dentist, but its relations with the public health officers, civic groups and voluntary agencies could stand improvement. It is not that personal relations between pharmacists and members of these groups are unsatisfactory, it is rather a lack of awareness on the part of these groups of the extent to which the pharmacists' contacts with the public differs from theirs. They are really in close touch with the public only when their specific services are required. On the other hand, because the pharmacy is patronized by both the ailing and the well, pharmacists obviously meet many more persons daily than do all the other health professions put together.

Every day more than 10 million people go into the nation's 55,000 pharmacies. In approximately 10,000 communities, a single pharmacy is the people's only source of drugs and medical supplies.[2] And in every community, pharmacies have patrons who have complete faith in the pharmacist and the professional service he gives.



An informed public is the most effective weapon in the control of health problems—one example of a "target area" for health information.

Table I

inquiry on specific health problems

Skin conditions	52
Customers coming in with recently acquired wounds and asking advice	35
Eye, ear, nose, throat disorders	33
Coughs and colds	30
Vitamins, tonics, etc.	25
Body aches (back, head, joints, etc.)	23
Gastro-intestinal disorders	11
Weight, pregnancy, etc.	5
Allergies	5
Weight reduction	4
Drug reactions	3
Genito-urinary disorders	3
Excessive sweating	3
Hemorrhoids	2

Table II

inquiry on general health problems

Directions for taking medication (OTC*)	15
Diabetes	15
Polio vaccines and its merits	7
Extermination problems (rats, mice, flies, ants, termites etc.)	6
Requests for competent medical practitioner	6
Requests for voluntary agencies involved with health problems chest x-rays; urine testing; blood testing	6
Sanitation problems (well water: septic tanks)	5
Price of Rx: payment for medication	3
Personal hygiene (women)	3
Use of a clinical thermometer—reading thermometer	2
Surgical supports (hernia belts, etc.)	2
First-aid items for medicine cabinet of factory, home	1

* (OTC) = over-the-counter purchase.

The pharmacist as a professional health worker participates in health education activities. He has long been desirous of receiving more recognition for the part he plays in the field of public health education. His daily contact with customers proves that there is no "one shot" approach. His role as a public health educator is a continuous one. He never limits his time, or period of the week or year to carrying out his responsibility. The pharmacist (present and future) is a particular kind of person with particular professional competencies which differentiate him to some extent from other public health workers. He has a wonderful opportunity to make his store a health information center for the entire community.

To those willing to be informed of present-day health problems, the pharmaceutical associations (national, state and local), the U.S. Department of Health, Education and Welfare, the World Health Organization, etc., provide a wealth of information.

The pharmacist's concept of health education is the process of imparting information about health in such a way that the recipient is motivated to use that information for the protection or advancement of his own, his family's or his community's health. It is fundamentally a learning process. It is not a bag of tricks, devices and technics that work for us to achieve specific goals.

People are avid readers of articles on health published in newspapers, magazines and books. One readership survey carried out by the department of journalism of New York University showed that 60 percent of the people polled were willing to give up some other kind of news to provide space for more of public health, medicine and other scientific articles. Advances in modern technics have aroused in the people a thirst for knowledge which is all the greater as it applies to one of man's most precious assets—his health and life.

Pharmacists emphasize in talking with people not to "do it yourself" when it comes to personal health problems but to seek competent professional advice.

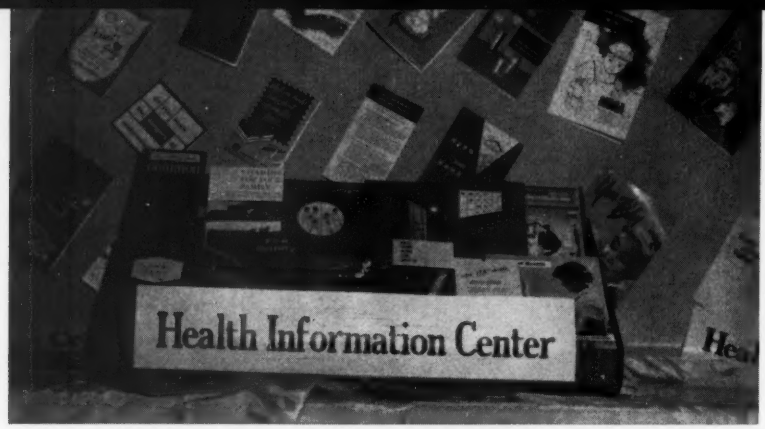
Pharmacists know through experience that health education is not the radio, TV or newspaper advertisement, yet this type of medium could work in changing people's thinking, feelings and behavior about health matters by careful, organized programming.

Now what can we do as pharmacists to improve ourselves, our association, and the quality of our participation so that we work for *"better community health?"*

Drugs and medicines are perhaps the most essential of all our necessities. They constitute the one category of goods which the American consumer cannot forego. He can put off buying clothing, a new automobile or even reduce the quality of his food, but if his health, and particularly the health of his children, requires expensive drugs and medicines, he must in some way purchase them.

Community pharmacies constitute a warehouse for these medical needs. Urgent requests are met within hours for the consumer. The alert pharmacist assumes this obligation. In addition to these "real" goods, the pharmacist maintains a warehouse of knowledge, sources of information, standards of performance, precautions and side reactions in regard to these medical needs.

This is the pharmacist's obligation to the community—to serve as an interpreter, communicator and consultant. He serves the public more efficiently by advising on health matters. There are six ways in which he handles this sensitive matter in the best interests of the public, the medical profession and his own profession.



A display rack, holding a number of interesting leaflets or pamphlets that can be read or taken home by customers, should carry the title "Health Information Center."

First: Nearly everybody worries about his health or someone else's. A considerable number of people are now in the habit of asking questions of the pharmacists regarding these worries. The well informed, alert, interested new American pharmacist is equipped to answer specific questions on health. He has a wealth of knowledge concerning the ingredients and the performance of these ingredients whether they are incorporated into a prescription or for purchase over the counter. However, he is not in the position to diagnose or prescribe on health problems.

Second: Recognizing certain clinical signs locally or systemically, the pharmacist is well qualified to recommend to his customer the services of a physician. This keen sense of observation and know-how often gets his customer to seek needed medical attention sooner than he would otherwise.

Third: In talking to his patrons in this way, the pharmacist provides information which takes a customer out of the classification "I am too busy to see a doctor" or "My illness is not that serious" or "I am afraid of what the doctor will find." The customers' questions indicate trouble and the attention given by the pharmacist to his patrons lessens their troubles and worries.

Fourth: As a continuation of his formal education, the present day pharmacist is being constantly informed on developments in the drug field. He is well equipped and informed about the nature of new products and new drugs. He has the initiative to keep abreast of modern drug therapy.

Fifth: The mass media of television has placed before the American public displays of health and related products. To the consumer, this is an easy way to plan his health needs regardless of how presented. We all enjoy the mechanical stomach, the brain factory, the simple chemistry experiments, the radiating cough centers. Television is exactly that—enjoyment—not prescribing medication to a phantom viewer. The pharmacist can do much to educate his customers against this presumable easy way to better health.

Sixth: Each coming season brings needed over-the-counter items. The pharmacist often has the opportunity to correct misinformation about what specific products do. He knows that some people attribute almost curative powers to certain products whether they be cough remedies, laxatives, antacids or analgesics. By informing his customers of the limitations of such products, of the possible "masking" of serious prevalent conditions, he is performing a high public service.

Community pharmacies today continue to develop a personality and character that makes them different from other kinds of establishments.

Increased emphasis on the prescription department and development of ethical products for better health will strengthen this identity of professionalism.

As an editorial in *Drug Topics* (January 18, 1960) states—

> The retail pharmacist has proved that conducting a profession within a commercial atmosphere does not detract from the stature and dignity of the professional person involved, as long as a proper balance and emphasis among various departments in the drug store are maintained.

Psychologically, this is the greatest identity needed—to be clearly identified as part of the vital health team in his community.

The creation of a health information center with pamphlets from manufacturing firms, insurance companies and the U.S. government could meet this need. Pharmacists have expressed a desire to participate in the vital communications of health in the community. Why not convert an old display rack, or make one, which will hold a number of interesting leaflets or pamphlets that can be read or taken home by customers? Such a permanent display rack should carry the title, "Health Information Center," and periodically pamphlets should be changed to present a variety of ideas to the public in the best interest of health.

C.R. Jordan, president of Jordan, Sieber and Corbett, Inc., New York, in a talk presented to the members of the Northern New Jersey APhA Branch on January 20, 1960 stated—

> I know of no single idea that is probably more adaptable to effective promotion than the development of a health information center in your drug store.

Jordan checked this idea with physicians and received a favorable response. The need to communicate in this whole matter of health in the community is a very vital one. Where else can it best be accomplished than in the individual, independent community pharmacies? This is the purpose of the health information center. You are certainly in a far better position than anyone else to understand the needs, desires and practices of your customers in your community.

During the spring of 1960, the Essex County Pharmaceutical Association supplied pamphlets and a banner to those members willing to co-operate. A few members immediately arranged to set up a center.

It would seem wise, therefore, to encourage every pharmacist to set up such a center. Pharmaceutical associations should look for ways and means to expand such a program which will not only promote pharmacy's public relations but also will show other community groups just how extensive this activity is.

References

1. Swain, Robert L., *Drug Topics*, editorial (July 4, 1960).
2. *Tile and Till*, 46(March 2, 1960).

by Marvin L. Miller*

expanding role of the community pharmacist . . .

source of information to the physician

A recent HIF survey explained that the pharmacist is the physician's most accessible source of information and is frequently called upon to answer drug inquiries. It is necessary, therefore, that the pharmacist keep abreast of the pharmaceutical developments to fulfill the role of physician's consultant.

A community pharmacy has a dual profile. On the one hand, it is a professional institution which plays an important role as a member of the health team. On the other hand, it is a retailing enterprise and it merchandises products both directly related to and completely removed from the health field. The genus of community pharmacy is broad and its members run the gamut between its extremes.

Marketing manager for William Douglas McAdams, Inc., New York pharmaceutical advertising agency, Marvin L. Miller is a registered pharmacist in Pennsylvania and Wisconsin and a member of the advisory board of the National Physicians' Advisory Panel. Miller was graduated from the Philadelphia College of Pharmacy and Science with a BS degree in 1957 after having served as editor of the college newspaper and advisor to "Campus," a national magazine. Under a Pfizer Foundation fellowship, he earned his MBA in marketing in 1959 from the University of Wisconsin. Before joining William Douglas McAdams he was associate editor of the "Wisconsin Druggist."

There are pharmacies which offer educational services to physicians such as monthly news letters, new product sections and drug detailing. In each of these instances it is the pharmacist who takes the initiative and decides the availability and extent of these services. However, the initiative may come from either party and it is often the physician who seeks out the pharmacist for professional information.

The pharmacist has been recognized as a source of information to the physician. A survey conducted for the Health Information Foundation showed 16 percent of physicians avail themselves of this service. The pharmacist has been acknowledged as a source of information by the pharmaceutical manufacturer. His therapeutic consulting role has been widely publicized by the pharmaceutical press.

Pharmacy has been encouraged to strengthen its function as a source of information to the physician and as a therapeutic consultant. Today, the spatula and pill tile are bowing to the razor blade and counting tray. The task as consultant has been suggested as a new professional duty, replacing the traditional responsibility of compounding.[1] Whether the pharmacist primarily considers this a professional duty or thinks of it as a form of nonprice competition is a matter of conjecture. Nevertheless, his services are being used by the physician.[2]

physician's dilemma

At a recent conference of the secretary of Health, Education, and Welfare, a number of representatives of national medical groups indicated that there was "much confusion on the part of the physician by the welter of trade names for the same drug products" and that there was a need for "more rapid information on toxicity, contraindications and limitations of usage."[3] This declaration exemplifies the difficulties with which the medical field is faced in an era of rapid pharmaceutical innovation. Besides devoting their time to patient care, physicians attempt to keep abreast with the stream of new products and the therapeutic advantages they offer. Few physicians will openly admit they might have been able to treat a patient more effectively had they been aware of newer pharmaceuticals,[4] yet such cases have been reported.

An unfortunate gap often exists between what physicians should know about current pharmaceuticals and what they do know. As a result, patients may not receive as good medical care as it is possible to receive.

channels for disseminating information

The physician continually receives pharmaceutical product information from a variety of sources. He is the target of multiform promotional technics. Yet despite the quantity of these communications, the physician's inability to keep fully abreast of the latest pharmaceuticals remains a problem.

The pharmaceutical sales representative is mentioned most frequently as a source of product information by 44.3 percent of physicians.[6] One possible shortcoming of the detailing effort is that the detailer is not always prepared to furnish complete product information. A number of physicians attest to this inadequacy.[6] Furthermore, because he does represent a particular company, the detail man may de-emphasize his product's contraindications and side-effects or tend to be biased in

* Condensation of seminar paper submitted as part of the requirements for an MBA at the University of Wisconsin.

answering the physician's questions. Lastly, he is not a very accessible source should the physician wish to confer with him.

The physician may be aware of a product's availability but have no occasion to employ its use. When a situation does present itself for which the drug is indicated, he may ponder. Perhaps it is the dosage form, the strength or even the correct spelling of the drug itself which has slipped his mind. And because of his incomplete knowledge for prescribing purposes, he may revert to an "old favorite." Or perhaps, if he is sufficiently motivated, he may seek out more information about a drug. Colleagues, pharmaceutical reference books and pharmacists are all sources. In this instance it is the physician who avails himself of these sources.

The pharmacist is the most accessible of all the sources. The physician needs simply to pick up the telephone and he can be sure there will be a pharmacist on duty to answer his questions. The physician may feel less embarrassed to ask the pharmacist than a fellow colleague since he is not imposing on a person with whom he is in competition. The pharmacist also should be a less biased source than the detail man and he is especially of value when the physician needs information quickly.

physician–pharmacist relationship

A physician professionally communicates with the pharmacist under a variety of circumstances. He often telephones prescriptions for his patients, asks the pharmacist to refresh his memory concerning a prescription which he had previously written and contacts him for other reasons. In the same fashion, the pharmacist may call the physician, for instance, to verify a prescription which the doctor has written. In each of these instances, the pharmacist is performing an important function. In his role in disseminating product information to the physician, he is a channel which may help to shorten the gap between what the physician would desire to know about pharmaceutical products and what he actually does know.

A study conducted by the *American Druggist*[7] showed the following percentage distribution of reasons for pharmacists receiving inquiries from physicians concerning products—

names of products	82.2%
dosage	71.8
composition	69.3
availability	68.2
prices	65.3
form and packaging	63.9
who makes product	57.4
refill status	18.8
cautions	18.7

Physicians do not always ask such questions outright. Rather, when calling the pharmacist they sometimes disguise their questions in the course of dictating prescriptions for patients. This subterfuge may or may not be intentional. It seems tenable that such a technic might especially be followed when a patient is in the physician's office at the time the phone call is made. In this way the physician does not display his incomplete knowledge of a drug before his patient.

proposed standards

Upon reviewing the problems of medical communication and the use of the pharmacist as a possible source of information, a rationalization is evident. Assuming the pharmacist can adequately perform this function, the physician should exploit his services because the physician needs this function performed. As logical as this statement sounds, the idea it expresses is often neglected in encouraging the pharmacist to perform this role. Too often the pharmaceutical press suggests the pharmacist promote his advisory function in the expectation of attaining a greater prescription volume, aiding his professional reputation and raising the physician's esteem of pharmacy.

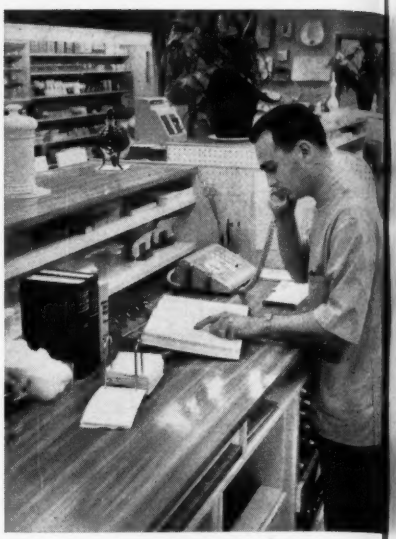
Typical is a comment which suggests the pharmacist be of service to the physician—

> . . . to foster and secure a cordiality and a degree of professional intimacy that eventually and inevitably will result in the physician's increased reliance upon our services, plus a consequently increased patronage.[8]

True, it is likely the pharmacist will increase his prescription volume and will elevate the profession of pharmacy. But these ends should be considered by-products of a more vital role. That role is to perform the function of an information source *because the physician needs it performed.* It is this altruistic objective toward which the pharmacist should concentrate his efforts.

A distinction is in order at this time. The pharmacist has variously been described as being able to supply information to the physician and as serving the function of a therapeutic consultant. This difference in phraseology is not merely semantics. The former role is that of directly reporting information about a product; the latter, "therapeutic consultant," denotes a discriminatory ability to compare the therapeutic properties of medication and offer an unbiased opinion of the efficacy of a particular product for a given situation.

It is necessary to think of the standards to which the pharmacist should be held in a realistic light. Many pharmacists perform duties both directly related to and completely removed from the province of pharmacy as a profession.



Today the pharmacist is more than a compounder of medication. He serves as a health consultant to the community and as a source of information to the physician.

If the pharmacist is to be an information source, all pharmacists should be readily accessible to the physician. Should a physician desire to know the availability of medication with a given therapeutic action, every pharmacist should be able to supply this information. Here is where the pharmacist's discretionary ability is to be exhibited. From the gamut of products available, the pharmacist should be capable of discerning which drugs have the desired action. Next, the pharmacist should have adequate pharmaceutical literature at his disposal from which he might supply a detailed monograph of the products he mentions to the physician. The time necessary to seek out this information should be minimal.

A number of pharmacists should go beyond the role as a source for information. Here a therapeutic consultant ability is to be expected. Many pharmacists perform a host of sundry duties which are unrelated to pharmacy and thus would find it difficult to keep completely abreast for this consultant role. This standard should be expected of those pharmacists who devote a preponderance of their time to handling and dispensing pharmaceuticals. Moreover, it seems likely that the physician would be more prone to seek such individuals in wanting product information or advice.

methodology

An attempt was made to find out how well the pharmacist is prepared to function as a source of information to the physician. To do so it was necessary

to gain the co-operation of the medical profession. A test city was then selected. There were 57 pharmacies in that city.

Each of the pharmacies—including four hospital pharmacies—was called on the phone and the pharmacist who answered was asked to suggest products for given conditions. During the study, the respondents answered 540 questions concerning the manufacturer, forms, strength, dosage, composition and cautions of the products in question. The average conversation with each of the pharmacists lasted just under five minutes.

Three types of answers were possible: a correct answer, an incorrect answer and a "don't know" or incomplete answer. Of the 540 questions asked, here is a percentage of the correct answers given by the pharmacists involved in the study—

question on	correct replies (in percent)
Composition	100.0%
Manufacturer	100.0
Forms	98.9
Strength	98.9
Dosage	94.9
Cautions	41.1

Two prescription pharmacies and five traditional pharmacies suggested unacceptable products. All the hospital pharmacies correctly named suitable products.

It appears, therefore, that the pharmacist is performing commendably in most areas, that he is prepared to function as a source of information. It was also found that the time needed for him to supply the information was held to a minimum. The average time necessary to search for the information was 45 seconds, with some pharmacists offering the information immediately while one pharmacist left the phone for a total of 285 seconds.

It was also possible to observe the reference used by many of the pharmacists in supplying the information. Of the respondents, 10.5 percent used the *Physician's Desk Reference;* 8.8 percent used *Modern Drug Encyclopedia* and 1.8 percent used file cards.

When the responses were correlated as to type of reference used, it was discovered that many of the pharmacists employing these references are not using them properly, or else these sources are not being kept up-to-date. Otherwise, this group of pharmacists would have performed better than they did. Some of the pharmacists had these references in the store yet they did not use them and it was difficult to explain why. Instead many attempted to obtain the information solely from the label of the bottle, or from some other less desirable source.

table 1

correct drugs mentioned by type pharmacy

type of pharmacy	number of pharmacies mentioning—products						
	0	1	2	3	4	5	Total
hospital pharmacy	0	0	0	1	1	2	4
prescription pharmacy	0	2	4	1	1	0	8
traditional pharmacy	4	12	25	2	2	0	45

Upon tabulating the number of drugs which were mentioned by the pharmacists, there was a median average of two pharmaceuticals mentioned by the prescription and traditional stores, and four and a half products mentioned by the hospital pharmacies. The response is further classified in Table 1.

The total percentage of correct answers given concerning product information by type pharmacy is shown in Table 2.

table 2

correct product information by type pharmacy

type of pharmacy	total percent correct answers (concerning manufacturer, forms, strength, dose, composition and cautions)
hospital pharmacy	95.8%
prescription pharmacy	90.5
traditional pharmacy	87.7

In supplying product information, two of the prescription pharmacies and three of the traditional pharmacies furnished incorrect information. None of the hospital pharmacies furnished incorrect information.

Only two pharmacists, both of hospital pharmacies, displayed an ability as a therapeutic consultant, in the author's estimation. In each of these instances, although they mentioned several antibiotics which would prove of value for resistant staphylococcus, they recommended the particular products giving the best results in that hospital. They singled them out as being more desirable than the other products which they mentioned.

One of the hospital pharmacists went a step further and displayed what appeared to be an exceptional ability as a therapeutic consultant. In addition to suggesting an antibiotic of choice, he virtually reported verbatim the results of an annual antibiotic symposium which had been conducted three months previously.

None of the pharmacists in the prescription or traditional pharmacies appeared to display a consulting ability. A few of the pharmacists did, however, indicate that a particular product seemed especially desirable. In each instance, they based their recommendation on the fact that "Dr. ——— writes for ———," or "we're getting the most prescriptions for ———." Therefore, the community pharmacists in this study appeared to base their approbation on the volume of prescriptions written for a particular product. This source appears questionable unless the pharmacist actually knows the conditions under which the medication was prescribed.

If the sample area used in this study is considered typical, then the physician calling the pharmacist in reference to routine information concerning pharmaceutical products can expect the pharmacist to supply this information.

new goals for pharmacies

It appears likely that physicians would be more inclined to seek out those pharmacies which they believe to be especially competent and which have performed proficiently in the past. If this is true, then in actual practice a relatively small number of pharmacists might be expected to answer a majority of physicians' questions. In this study, every pharmacy in the test area was examined. If pharmacists are to be proclaimed as a source of information to the physician, then all pharmacies should be held to this function.

If all pharmacies are held to be sources of therapeutic information to the physician, then perhaps there are too many pharmacies in existence today. The number of prescriptions may not warrant all of them taking this responsibility upon themselves. Stores which dispense few prescriptions may believe it unnecessary to organize reference files and keep abreast of pharmaceutical literature.

This is not necessarily to suggest that there are too many pharmacies *per se*, but an excessive number may exist if all pharmacies are to function as sources of information and therapeutic consultants. It may be argued that this is not the primary function of pharmacy and if pharmacy is to help safeguard public health, then a large number of pharmacies must exist to be conveniently accessible to the public. Perhaps pharmacy should be called upon to redefine its goals and objectives in terms of the extent to which it desires to be of service to the physician.

To perform proficiently as a source of information and therapeutic consultant requires an appreciable amount of time

and effort on the part of the pharmacist. Realizing the difficult nature of this task, does the pharmacist receive sufficient financial reward for performing this service? It is debatable whether the supposed increase in prescription business which the pharmacist may hope to acquire is an adequate return for his efforts. And the physician is forbidden by ethics to direct a patient to a particular pharmacy.[9] This consideration may well influence the decision of the pharmacist to avoid taking these responsibilities upon himself. Should the information he willingly provides be in error, it is possible that he might be held liable.

Another explanation for the wide variation in response is that the physician today may not call upon the averge pharmacist with sufficient frequency to encourage his performing these functions. Perhaps the physician has found the pharmacist to perform rather poorly in the past. Then again, the physician may believe that he displays ignorance when he calls upon the pharmacist or he may not wish to seek someone of "lower stature."

The physician's omnipotence may be another reason for his disinclination to seek the pharmacist. Some physicians consider themselves supreme healers and they do not wish to share their success with anyone.[10]

The physician's reluctance to avail himself of the average pharmacist's knowledge frequently represents a chicken-and-egg dilemma. Should the physician be encouraged to call upon the pharmacist with greater frequency and thus motivate the pharmacist to perform in these capacities? Or should the pharmacist be encouraged to seek greater proficiency and thereby encourage the physician to call upon him?

Poor communications may be another explanation for many pharmacists' shortcomings. An *American Druggist* study shows that pharmacists generally believe the manufacturer does not give them enough information.[11] Of course, this is a matter of degree and it is conceivable that the pharmacist wishes to be "spoon fed" and even then he may discard the information given to him. Yet it is most disconcerting to see medication supplied to the pharmacist with the legend "literature available to physicians upon request."

The quality of communications may present another problem. The literature which the pharmacist receives may minimize the product's undesirable qualities.[12] Many of the references currently used by pharmacists and said to be of value are nothing more than superficial in nature.[13] Although the pharmacist may have purchased these references with the intention of using them as an aid in helping the physician, these sources often leave much to be desired in thoroughness.

educational implementation

What factors appear to be emboldening the pharmacist to be of service to the physician and strengthening his present preparedness? Some important directive institutions seem to be gaining recognition.

If graduate pharmacists are to serve proficiently as therapeutic consultants, then the courses in pharmacy schools may have to be revamped.[14] A five-year pharmacy program adopted in 1960 may prove to strengthen the pharmacist's knowledge of the biological and medical sciences.

Postgraduate education of the practicing pharmacist is also an effective media in assisting him to assume his functions better. Recently, pharmacy extension services have been playing an important role in postgraduate education of the pharmacist. The pharmaceutical press and professional organizations also are valuable sources.

Yet despite the wealth of literature which can be placed at the pharmacist's disposal, its persistence will be of no value unless the pharmacist avails himself of the information, reviews it continuously and maintains it for handy reference. It is the pharmacist himself who will determine how well or how poorly he will be prepared to function as a source of information and therapeutic consultant.

State board regulation has been suggested as a possible answer. One state is considering making it mandatory for a registered pharmacist to attend a refresher course at least once in four years to be eligible for re-registration.[15] But in the author's estimation, legislation is an artificial means to an end. If pharmacy truly is a profession, then the desire to be of service should be an inherent responsibility coveted by each and every pharmacist. No other approach can be as positive. ●

References

1. Bellafiore, I., "Therapeutic Consultant," THIS JOURNAL, **19,** 90(Feb. 1958).
2. Bugbee, G., "A Survey of the Pharmacist as a Professional Man," presented at Pharmacy's Public Health Forum, Long Island University, Mar. 13, 1956.
3. *Voice of the Pharmacist*, **2,** 3(Dec. 23, 1958).
4. "Medical Science Is Accelerating: Can Doctors Keep Up?" *Wall Street Journal*, 1 (June 30, 1958).
5. Ferber, R. and Wales, H., *The Effectiveness of Pharmaceutical Promotion*, University of Ill., Urbana, Ill., 26(1958).
6. "The Doctor Measures the Detailman," *Medical Marketing*, 2(Feb. 1952).
7. "MD Visits to Pharmacies Rise 15% in Cities, 5% in Small Towns, Study Finds," *American Druggist*, **140,** 5(Apr. 21, 1958).
8. C.A. Graham, "Do It Yourself Detailing," *Southern Pharmaceutical Journal*, 20(Oct. 1957).
9. Bellafiore, I., *loc. cit.*, p. 90.
10. "Basic Motives for MD Dispensing," *American Druggist*, **138,** 11(April 23, 1956).
11. *American Druggist*, *loc. cit.*, p. 6.
12. Garb, Solomon, "The Reaction of Medical Students to Drug Advertising," *The New England Journal of Medicine*, 121(July 17, 1958).
13. Bellafiore, I., *loc. cit.*, p. 91.
14. Bellafiore, I., *loc. cit.*, p. 91.
15. *The Voice of the Pharmacist*, July 29, 1958.

convention notes

resolution deadline

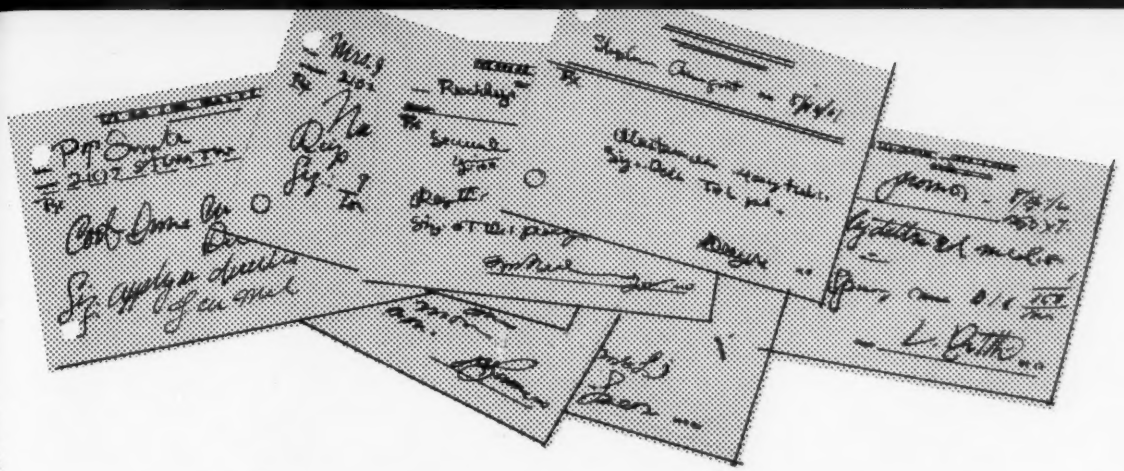
Deadline for resolutions to be submitted to APhA's House of Delegates for consideration during its 1961 annual meeting in Chicago is **March 24.** All resolutions must be submitted in duplicate and mailed to reach Dr. William S. Apple, Secretary, American Pharmaceutical Association, 2215 Constitution Ave., N.W., Washington 7, D.C., by the deadline March 24. Resolutions should be typewritten on standard form available from APhA and they must indicate the name of the organization and/or individual delegate submitting the resolution. Separate forms are required for each resolution.

hotel reservation form

Don't forget the APhA convention is just around the corner. You'll be heading for the Hotel Sherman in Chicago to attend the session April 23–28.

Send in your hotel reservation form now to make sure you have the accommodations you want.

A reservation form has been sent to you in the mail; another one appeared in the January issue of the JOURNAL. Use one of these forms to make your reservation but be sure to send the form to the APhA Housing Bureau, 134 North LaSalle Street, Chicago 2, Illinois—**not** to APhA headquarters.



unfilled prescriptions in your community?

by Robert W. Hammel,
Norman A. Campbell
and Paul O. Williams

a community study* of the incidence and basis for unfilled prescriptions

What percentage of physicians' prescriptions originating in your community remain unfilled? Are such unfilled prescriptions largely attributable to pharmacists' inadequate stocking and inventory control?

The opinion that many patients are not receiving medication prescribed by their physicians is being voiced by numerous individuals ranging from politicians to representatives of the pharmaceutical industry! The basis for this contention is the belief that a relatively high percentage of physicians' prescriptions are never obtained by or for the person for whom the medication is prescribed. Various reasons are advanced for this proposed condition—the cost of prescription medication perhaps being the most frequent.

One writer calls attention to "the fact that 20 percent of the prescriptions remain unfilled."[1] Furthermore, he is of the opinion that this high figure is "generally verified."[2]

One speaker reported a study in which 31 percent of the prescriptions were unfilled.[3] This finding was based upon a follow-up survey of 100 prescriptions written for one prescription product, the identity of which is unknown to the authors. Community pharmacists' failure to stock the "well-known and established" pharmaceutical was cited as the greatest single contributing factor to patients' failing to obtain the prescribed medication.

The lack of contribution to patients' welfare to any extent approaching this high figure would imply the failure of community pharmacies to fulfill properly their vital role in the distribution of pharmaceuticals. Numerous other apparent social, economic, political and professional ramifications are manifest in the above statements and survey findings.

the study

A pilot study was designed for the purposes of (a) *investigating the extent of unfilled prescriptions in a select medical community*, and (b) *obtaining patients' avowed reasons why medication prescribed by their physicians was not obtained.*

The test city was a midwestern community of more than 8,000 population, the county seat and largest city in the county. It has some small, diversified industries and serves as the trading center for the surrounding farming area. The major health needs of the area are served by one hospital, six physicians in private practice and four community pharmacies. All physicians are on the staff of the hospital which has a full-time registered pharmacist in charge of its pharmacy. The hospital does not dispense medications to out-patients.

All six physicians participated in the research project. Each maintained a daily record of prescriptions written for or called into one of the community pharmacies for their local patients. Data supplied on the form included the date, name and address of the patient, medication, quantity of the drug and whether the prescription was written or oral.†

The records were maintained by the physicians in their offices for a three-week period in July 1960. A total of 745 prescriptions were recorded. They represented a wide variety of pharmaceutical dosage forms and therapeutic classifications, including both generic and trade-marked products. Approximately three-fifths of the prescriptions were written (59.3 percent) and two-fifths (40.7 percent) were oral.

Prescriptions for transient patients and those residing beyond the city limits were not recorded due to the difficulty of contacting these patients in the follow-up phase of the study. Since the records were maintained by the physicians in their respective offices, they did not reflect prescriptions which resulted from house calls and other non-office patient contacts.

The physicians' records were collected periodically and compared with the prescription files of all four pharmacies to eliminate those prescriptions actually filled in the community and received by the patient. Prescription files were checked for ten days following the three-week data recording period.

Personal interviews were conducted with those patients whose prescriptions did not appear in the pharmacists' files in an attempt to determine why the prescriptions had not been filled. The interviews were conducted with the aid of a specially constructed and pretested "Health Services Questionnaire."

The questionnaire covered patients' utilization of the services of all health care professions and institutions in the community so as to avoid any bias to-

* Research project supported by a grant from Dorsey Pharmaceuticals, Lincoln, Nebraska.

† The term "oral prescription" as used in this report means a verbal order from a physician to a pharmacist for medication for one of the physician's patients.

ward pharmaceutical services. In order to reduce recall bias, all interviews were concluded in less than a month after the physician had ordered each unlocated prescription. Additional interviews were conducted with patients whose prescriptions were on file in the community pharmacies. The primary purpose of the latter step was to minimize any possibility that a number of patients would collectively rationalize the basic purpose of the interview. This added precaution was deemed wise since the interviews were conducted over a period of several weeks. Also it was desirable to avoid the slight possibility of an individual patient associating the interview with his or her failure to follow the physician's directions.

Relevant standard demographic data were collected along with each "Health Services Questionnaire." The information received included the age, education and occupation of both male and female heads of the household where applicable, plus the household's approximate total annual income.

major findings

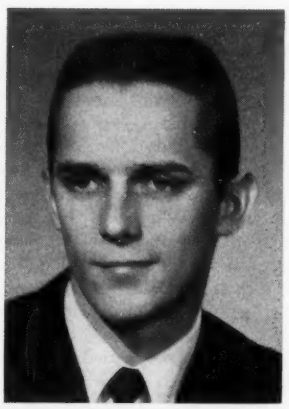
All but 20 of the 745 prescriptions recorded by the six physicians were filled at one of the community pharmacies within not more than ten days after the medication was prescribed. The 20 prescriptions were ordered for 17 different patients who thus comprised the relevant universe for the second phase of the study. One patient for whom two prescriptions were written had had both of them filled in another community while on a weekend vacation. Therefore, at the time of the interviews, only 18 of the 745 recorded prescriptions, or 2.4 percent, remained unfilled.

A summarization of the remaining pertinent responses to this area of the inquiry appears in Table I. It is likely that the first three categories of responses would have been altered had more direct questions been employed in the interviews. For example, it was apparent to the interviewer that three of the four respondents in group II had reference to a physician contact other than that which resulted in the recorded prescription. It is also likely that a follow-up of the prescriptions in categories IV, V and VI would reduce the number of prescriptions which remained unfilled to below two percent of the total number recorded.

Fifteen of the 18 unfilled prescriptions were written and three were oral. The 18 prescriptions represented 11 therapeutic categories and both generic and trademarked products. All unfilled prescriptions were independently priced at their regular prescription value by the four community pharmacies.

Assistant professor of pharmacy administration at the University of Wisconsin, Robert W. Hammel has returned to his alma mater to continue his career. He holds a BS, an MBA and a PhD degree from the University of Wisconsin. His career has included experience in community pharmacy and two tours of active duty with the Navy. In addition he is now a lecturer in his naval reserve unit, holds a life membership in APhA and is affiliated with a number of other professional organizations and honorary societies.

Norman A. Campbell, a teaching assistant at the University of Wisconsin school of pharmacy, is a registered pharmacist, in Rhode Island and Wisconsin. Originally from Pawtucket, Rhode Island, he obtained his BS degree in pharmacy from the Rhode Island College of Pharmacy and Allied Sciences in 1957. He is a member of APhA, Kappa Psi and the Rhode Island Pharmaceutical Association.



In the graduate pharmacy administration program at the University of Wisconsin, Paul O. Williams is continuing his education at the school where he received his BS degree in June 1958. After becoming a registered pharmacist, he served six months as a second lieutenant in the Army medical service corps before resuming his studies. He is a member of APhA, Wisconsin Pharmaceutical Association and American Marketing Association.

Table I
response of patients with unlocated prescriptions

Group	Summary of Response	Number of Patients	Number of Prescriptions
I	Stated that the prescription was filled in the community	4	5
II	Had seen a physician, but stated they had not received a prescription	4	5
III	Stated that they had not contacted a physician within the last month	3	3
IV	Did not need the medication at that time—planned to have prescription filled later	2	2
V	Still had some of the same medication at home	2	2
VI	Did not feel a need for the medication	1	1
	Totals	16	18

Table II

indications of central tendency for 18 unfilled prescriptions

Mean Price	$2.56
Modal Price	1.25
Median Price	2.00

The prescription price range was from 75¢ to $7.25. Other statistical characteristics of the prescription prices appear in Table II.

The most frequent price was $1.25; half of the prescriptions were priced at $2 or less and the mean or "average" price was only $2.56. A comparison of the dollar value of individual prescriptions and patients' reported incomes did not support the proposition that prescriptions remain unfilled because patients cannot afford them.

The 18 unfilled prescriptions were for 18 different pharmaceutical products. All 18 were products normally stocked by the four pharmacies and were in stock in all pharmacies at the time of the study.

limitations

Although this research project had the co-operation of all practicing physicians and pharmacies in the community, it was still a community study and as such does not warrant generalizations to other geographical areas. Numerous variables such as the time of the year, the nature and severity of the specific illnesses treated and others exerted an unmeasurable influence on the findings of the study. Also the reasons why some patients do not have their prescriptions filled cannot, of course, be concluded from the interviews with these 16 respondents.

conclusions

The extent to which patients do not have their physicians' prescriptions filled was studied in one community and found to represent only 2.4 percent of all recorded written and oral prescriptions. The study included the many therapeutic classifications of drugs and the various pharmaceutical dosage forms which physicians prescribe in their normal day-to-day practices. The findings based upon the methodology employed in this study lead the authors to believe that the generalizations inferred from the incidence of unfilled prescriptions previously reported are unrealistically high.

This study gave no indication, either as reported by the patients or inferred from their income status, that the cost of prescription medication in itself acted as a deterrent to having prescriptions filled. Furthermore, none of the unfilled prescriptions could be attributed to the pharmacists' failure to provide the prescribed medication. All pharmacies participating in this study were successfully fulfilling the function of providing adequate local distribution of prescription drugs. ■

References

1. Hawkins, Norman G., "The Detailman and Preference Behavior," *The Southwestern Social Science Quarterly*, 218 (December 1959).
2. Personal correspondence dated March 11, 1960.
3. Gibson, Lee L., then vice president, sales, Lakeside Laboratories, speech in Baltimore, Md., March 12, 1959.

official notice to the membership

Official notice is hereby submitted to the membership that the following amendments to the *Constitution and By-Laws* will be reported by the committee on constitution and by-laws for consideration at the general sessions of the annual meeting to be held at the Sherman Hotel, Chicago, Illinois, during April 23–28, 1961.

Changes in the constitution and by-laws related to membership matters and voting by mail ballot reflect recommendations made by the House of Delegates at the 1960 annual meeting. Changes in the by-laws related to the election of officers reflect recommendations made by the Council at its January 1961 meeting.

constitution

present

Article III. Membership. This ASSOCIATION shall consist of active, associate, life and honorary members, and shall hold its meetings annually.

Article VIII. Amendments. Every proposition to alter or amend this Constitution shall be distributed to the members at least thirty days prior to the annual meeting, either by direct mail or in the JOURNAL. Every amendment shall be read at the first General Session of the annual meeting, and shall be balloted upon at a subsequent General Session when, upon receiving the affirmative votes of two-thirds of the members present, it shall become a part of the Constitution. Any proposition to amend the Constitution for the purpose of permitting the expenditure of the permanent invested funds of the ASSOCIATION shall require a majority of seven-eighths of the members present for its passage.

recommended

Article III. Membership. This Association shall consist of active, associate, student, life and honorary members, and shall hold its meetings annually.

Article VIII. Amendments.

1. Every proposition to alter or amend this Constitution shall be subject to one of the following procedures:

a. It shall be distributed to the active and life members at least thirty days prior to the annual meeting, either by direct mail or in the Journal. It shall be read at the first General Session of the annual meeting, and shall be balloted upon at a subsequent General Session when, upon receiving the affirmative votes of two-thirds of the eligible members voting, it shall become a part of the Constitution; or

b. It shall be mailed to the active and life members of the Association together with a mail ballot in which their vote may be recorded and returned within thirty days of the date printed on the ballots, and upon receiving the affirmative votes of two-thirds of the eligible members voting, it shall become a part of the Constitution.

2. The selection of the procedure to be used shall be at the discretion of the Council.

3. Any proposition to amend the Constitution for the purpose of permitting the expenditure of the permanent invested funds of the Association shall require a majority of seven-eighths of the eligible members voting.

(*Continued on page 168*)

an extemporaneous enteric coating

by E. L. Parrott*

A dosage form is enteric coated if the coating will prevent disintegration in the stomach but will permit disintegration in the intestinal tract. In addition, an ideal enteric coating must be non-toxic and physiologically inert. Occasionally the dispensing pharmacist is requested to prepare enteric coated capsules or tablets.[1,2] A suitable method for the extemporaneous preparation of enteric coated capsules and tablets is still being sought.

Traditionally, salol has been suggested as an extemporaneous enteric coat; however, the difficulty of application and the exceedingly brittle coat make salol unsatisfactory. Salol has been replaced, to some degree, by a mixture of n-butyl stearate, carnauba wax and stearic acid applied with the aid of heat.[3] This mixture is easy to apply and effective; however, the coating tends to peel from the smooth surface of a capsule and appreciably increases the size of a capsule. Tablets coated with this mixture are not pharmaceutically acceptable due to their physical appearance.

A coating of cellulose acetate phthalate has the desired characteristics of a good enteric coating. The softening or dissolving of cellulose acetate phthalate does not require fluids of high pH but only solutions which will contribute ions to the phthalate carboxyl and enhance the solubility of the cellulose acetate phthalate in the aqueous medium.[4] Cellulose acetate phthalate coatings further disintegrate due to the hydrolytic effect of the esterases of the intestinal tract.[5] From the viewpoint of the pharmacist, the suggested method of cellulose acetate phthalate coating requires no elaborate equipment, is not too time-consuming and is easy to apply.

* The author is indebted to Vernon Peck for technical assistance.

experimental

Equipment used to apply a coating of cellulose acetate phthalate is found in all pharmacies. A 10 percent solution of cellulose acetate phthalate† in acetone is placed in a small vial. The capsule is dropped into the solution and then it is removed with a tweezers. The capsule is allowed to touch the lip of the vial to catch any excess solution. The capsule is held in the tweezers for one minute after which it is placed on gauze. The gauze permits circulation of air about the capsule to insure complete evaporation of the solvent. In this manner all of the capsules of the prescription are coated. The cycle is repeated until three coats have been applied.

† Cellulose acetate phthalate, Eastman Kodak Company, Rochester, New York.

Associate professor of pharmacy at the University of Nebraska, registered pharmacist, co-author of "Experimental Pharmaceutical Technology"—such are some of the titles worn by Eugene L. Parrott. Under an AFPE fellowship he earned his PhD from the University of Wisconsin where he had obtained his BS degree. Before joining the University of Nebraska in 1957, he had been a member of the faculty at the University of Arizona and a pharmaceutical chemist at Pfizer Laboratories. A life member of APhA, he also holds memberships in Rho Chi, Sigma Xi, Phi Lambda Upsilon and Phi Kappa Phi.

One advantage of this method is that it may be used to apply the coating to tablets as well as to capsules. It is recommended that *in vitro* disintegration tests be run on coated tablets as unspecified ingredients in the tablet formulation may modify the effectiveness of the cellulose acetate phthalate coat.

To evaluate the coating, capsules containing 600 mg. aspirin equivalent of Calurin‡ and 200 mg. of potassium

‡ Calurin was kindly supplied through the courtesy of Dorsey Laboratories, a division of the Wander Company.

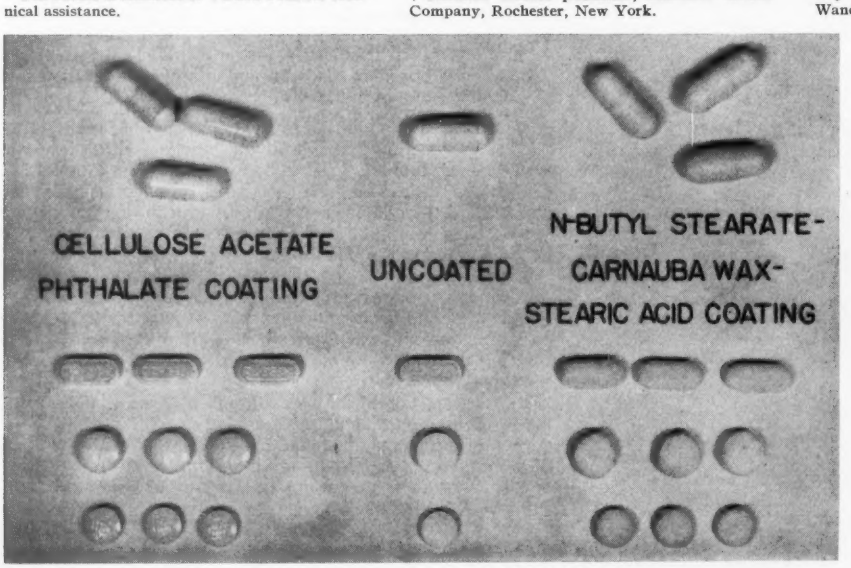


Figure 1—Preparations of n-butyl stearate-carnauba wax-stearic acid coated and cellulose acetate phthalate coated tablets and capsules.

Table I—in vivo comparison of two extemporaneous enteric coatings

	uncoated capsule		n-butyl stearate-carnauba wax-stearic acid coating		cellulose acetate phthalate coating	
	Subject A	Subject B	Subject A	Subject B	Subject A	Subject B
Iodide detected in saliva*	20 min	30 min	1 hr	2¾ hr	4¾ hr	5¼ hr
salicylate in urine collections						
0–2 hr	37 mg	23 mg	32 mg	7 mg	4 mg	4 mg
2–4 hr	56	34	37	33	5	4
4–6 hr	38	27	50	25	50	14
6–8 hr	34	—	19	25	57	27
0–24 hr	240	—	195	153	252	241

* When 200 mg of potassium iodide in solution was ingested, iodide was detected within ten minutes.

iodide were coated by students with cellulose acetated phthalate and compared to similar capsules coated with the n-butyl stearate, carnauba wax and stearic acid mixture. The average weight of the enteric coating of twenty-five 000-capsules coated with n-butyl stearate-carnauba wax-stearic acid mixture was 528 mg. in comparison to the average weight of cellulose acetate phthalate coating which was 43 mg. The cellulose acetate phthalate coating has the advantage of increasing the weight of a capsule by approximately one-tenth as much as the n-butyl stearate-carnauba wax-stearic acid coating.

In vitro disintegration was determined by using the USP disintegration method employing discs. The coated capsules were exposed to simulated gastric fluid TS for one hour at 37°C. The cellulose acetate phthalate coated capsules remained intact. For the most part, the n-butyl stearate-carnauba wax-stearic acid coated capsules remained intact; a few chipped but no attempt was made to quantitatively evaluate the extent of chipping.

The capsules were then rinsed with distilled water and transferred to simulated intestinal fluid TS at 37°C. With both types of coatings all the capsules released their contents within 30 minutes.

After storage at room temperature for four months, the disintegration tests were repeated. No change in disintegration was apparent with either coating.

As cellulose acetate phthalate is used commercially and has been shown to be acceptable for enteric coating, *in vivo* tests were carried out to only a limited extent.[6,7,8,9] Coated and uncoated capsules containing 600 mg. aspirin equivalent of Calurin and 200 mg. of potassium iodide were ingested one or two hours after breakfast. The subjects emptied their bladder at the time of administration. Urine specimens were collected and the volumes measured at two-hour intervals. The total salicylate was quantitatively determined by the method of Smith.[10] The time required for the appearance of iodide in the saliva was determined.[11] The results are given in Table I.

summary

A "dipping method" for the extemporaneous coating of capsules, pills and tablets with cellulose acetate phthalate appears to be effective and practical for use in a community pharmacy. The cellulose acetate phthalate coating is as effective as and less readily chipped than a n-butyl stearate-carnauba wax-stearic acid coating. The cellulose acetate phthalate coating has the advantages over n-butyl stearate-carnauba wax-stearic acid coating in that—

1. no heat is used in the coating process
2. there is less increase in weight of the solid dosage form
3. tablets may be coated as well as pills and capsules.

The cellulose acetate phthalate coating is stable and remains unchanged after storage at room temperature for four months.

References

1. Lippold, W., Personal communication.
2. Bauer, C.W. and Geraughty, R.J., THIS JOURNAL, **14**, 504(1953).
3. Stoklosa, M.J. and Ohmart, L.M., *ibid.*, **14**, 507(1953).
4. Malm, C.J., Emerson, J. and Hiatt, G.D., J. AM. PHARM. ASSN., *Sci. Ed.*, **40**, 520(1951).
5. Bauer, C.W., and Masucci, P.E., *ibid.*, **37**, 124(1948).
6. Hodge, H.C., Forsyth, H.H., Jr. and Ramsey, G.H., *J. Pharmacol. Exptl. Therap.*, **80**, 241(1944).
7. Partial translation of "Les Enrobages Modernes Des Dragées Et Des Pilules," Distillation Products Industries, 1958, Rochester 3, N.Y.
8. Antonides, H.J. and DeKay, H.G., *Drug Stand.*, **21**, 205(1953).
9. Abbott, A.H.A. and Allport, N.L., *Quart. J. Pharm. and Pharmacol.*, **16**, 183(1943).
10. Smith, P.K., Gleason, H.L., Stoll, C.G. and Ogorzalik, S., *J. Pharmacol. Exptl. Therap.*, **87**, 237(1946).
11. Holck, H.G.O., Miya, T.S., Dunham, N.W. and Yim, G.K.W., "Laboratory Guide in Pharmacology," Burgess Publishing Company, Minneapolis, Minn., 1959, p. 9.

Coming next month——————Preconvention issue

Highlights

Preliminary program for APhA sessions, section meetings, related and affiliated organizations

Outline of entertainment and special events

Early release date (the issue should be in your hands by April 1)

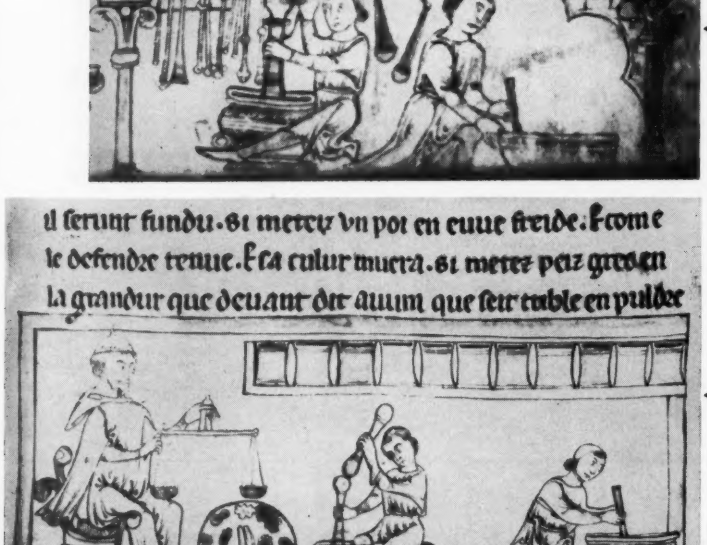
double-pestle action in medieval miniatures

by Loren MacKinney

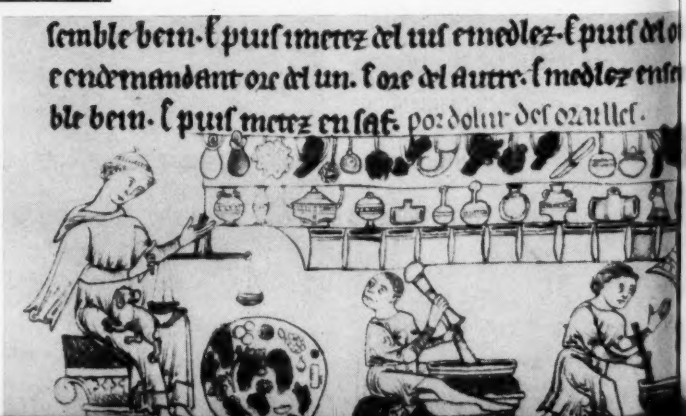
Since written history began, the association of the mortar and pestle with the practice of pharmacy has been so intimate that they have become symbolic of the profession. A variety of histories has been written, one of the most recent being published in THIS JOURNAL in February 1956 as part of the series entitled, "Tools of the Apothecary."[1] However, in all previously published histories the pestle has been almost completely overshadowed by the mortar. An examination of a variety of early miniatures showing the mortar and pestle in action has impelled me to summarize my findings in this pictorial presentation on "Double Pestle Action."[2]

An authority on medieval medicine, Loren MacKinney is a member of committees on the history of science in the United States and abroad. He has written numerous articles and has done research on medieval medical practices throughout Europe. A graduate of Lawrence College, the University of Wisconsin and the University of Chicago, MacKinney joined the University of North Carolina faculty in 1930 and was awarded an endowed chair in 1955.

One of the earliest manuscripts to include a series of illustrations showing the use of the mortar and pestle is the early thirteenth century copy of Roger's *Cyrurgie* preserved at Trinity College in Cambridge, England. In the lower margins of the manuscript (MS. 1044, folios 238–270) are 18 uncolored sketches of pharmaceutical activities, nine of which include pharmacist assistants using *two* pestles to each mortar. This miniature (folio 238) depicts a pharmacy in which a half dozen surgical instruments hang on the wall and pharmaceutical utensils fill the shelves. The foreground is occupied by two pharmacist assistants (evidenced by their short robes and the absence of professional headdress); one stirs a mixture in a bowl, while the other vigorously wields two huge pestles.



The reliance of surgeons on pharmacy is well exemplified by this miniature (folio 239v) from the same Roger manuscript. Below a description of the compounding of apostolicon, a surgical ointment, is this sketch of a pharmacy. To the left is a surgeon weighing ingredients on scales, and to the right are two pharmacist assistants. One of them seated before a large mortar uses double-pestle action to pulverize the ingredients;[3] the other stirs the ingredients in a large shallow bowl over a fire.



Other pharmacist assistants pictured in the thirteenth century Roger manuscript (as this one, folio 263) remind one of modern jazz drummers. They are shown seated with legs wrapped around the mortar to stabilize it. Noteworthy is the table-top of ingredients (circle at feet of surgeon), the numerous articles above the assistants, and the surgeon's lap-dog (possibly a status symbol, "man of distinction").

Throughout the thirteenth century, illustrations of double-pestles, though not universal, were popular.[4] This miniature from the thirteenth century manuscript of the *Antidotarium Nicolai* preserved at the British Museum (MS. Harley 3140, folio 255) depicts the author directing two pharmacist assistants each of whom wields two long slim pestles in tall mortars.

Of a similar slim shape are the pestles found in a manuscript of miscellaneous medical works, probably written and illustrated in thirteenth century France and now preserved in the Jagiellonska Library of Cracow, Poland (MS. 816 folio 101v).[5] The accompanying text provides the formula for *pomum ambre* (amber pills).

Double-action pestles are rare in fourteenth century manuscripts. At the beginning of the *Antidotarium* comprising Book V of Avicenna's *Canon* (in Vatican MS. Urb. Lat. 241, folio 364) is this miniature in an illustrated capital letter portraying a man in professional medical garb seated before a small mortar using two small, thin pestles. The only other fourteenth century example thus far located, is from the much reproduced miniature at the beginning of the Greek text of Nicolaus Myrepsus' antidotary in the Bibliotheque Nationale in Paris (MS. Greek, 2243, folio 10v).

By the fifteenth century, double-pestle tion seems to have given way completely single pestles of larger size manipulated ith both of the operator's hands, as own in this illustration from a fifteenth entury manuscript of Guy de Chauliac's *hirurgia* preserved at the Bibliothèque ationale in Paris (MS. Lat. 6966, olio 154v). The usual scenes in minitures of this period show large mortars eavy enough to remain stable on a low able or base while the pharmacist stands longside delivering heavy blows with a uge pestle which he must grasp with oth hands.[6]

Notes

Microfilms of miniatures reproduced here, along with other research materials, were provided from grants by the National Institutes of Health, the American Philosophical Society and the UNC Research Council. Miniatures are reproduced by gracious permission of Trinity College Library of Cambridge University, the British Museum, the Jagiellonska Library, Cracow, the Vatican Library and the Bibliotheque Nationale in Paris.

1. Similarly interesting histories have been published by Child in *Modern Pharmacy* (XXV, 1941, 6ff.), Lloyd in *Practical Druggist* (LII, 1934, 12ff), to mention only a few.
2. With one possible exception I have encountered no examples of double-pestle action in illustrations from ancient or Moslem times. A fifteenth-century B.C. Egyptian tomb painting (reproduced in Castiglioni's *History of Medicine*, page 52) depicts a pharmacist with what may be two pestles. Another curious miniature (reported in Adlung's *Die altesten deutschen Apothekerordnungen*, Mittenwald, 1931, p. 6) pictures two men, each with a pestle in the same mortar. So far as modern examples are concerned, contemporary pharmacists tell me that they never have seen double-pestle action either in pictorial records or in pharmaceutical practice. Data concerning any examples will be welcomed by the author and editors.
3. Underneath the scales the ingredients are shown on a round table, depicted clearly though unrealistically, as if in a vertical position.
4. See the example from a popular Spanish treatise on chess in a manuscript at the Escorial Library (MS. J. 16, folio 31). G.B. Griffenhagen presented this, along with other mortar-pestle illustrations, in "The Pharmacy in History" (*J. Internat'l Col. Surgeons*, XXIX, 1958,789–803).
5. A similar double-action miniature is found in MS 815, folio 4, which originated at about the same time and place as MS 816.
6. An exception to the "usual scene"—and our latest example of double-pestle action—is a fifteenth-century woodcarving of a centaur-pharmacist wielding two large pestles. It is reproduced in J.A. Hafliger's *Das Apothekenwesen Basel* (Basel, 1937), p. 192. Apropos of single, long, heavy pestles, many examples from the late fifteenth century onward to the present can be found reproduced in works such as Charles LaWall's *Four Thousand Years of Pharmacy*, H. Peters' *Pictorial History of Ancient Pharmacy*, Ferchl's *Apotheken-Kalendar* (especially for 1934, 1939, 1954–6, and 1960) and in numerous other works.

preparation on a small scale . . .

ophthalmic solutions

by Kurt Kleinmann and C. Lee Huyck*

Figure 1—Preparation of sterile ophthalmic solutions.

The pharmacy service of the St. Louis Veterans Administration Hospital for the past several years has used aseptic procedures in preparing buffered ophthalmic solutions containing 1:5,000 benzalkonium chloride as a preservative. However, it was felt that these solutions should be prepared in a sterile manner. This study was undertaken to determine a method of preparing sterile ophthalmic solutions which would be applicable to the hospital and to compare the antibacterial properties of some substances commonly recommended as preservatives for collyria.

Ophthalmic solutions can be sterilized by autoclaving or by bacteriological filtration. Although autoclaving of the solution in the final container is the preferred method,[1] most ophthalmic drugs are altered in potency unless prepared at the pH of maximum stability. Since it was desirable to use a buffer at or near physiological pH values[2] to make the solutions more acceptable to the patient, bacterial filtration was employed as the method of sterilization.

* From a study conducted at the St. Louis College of Pharmacy in co-operation with the pharmacy residency program, Veterans Administration Hospital, St. Louis, Missouri, Norman E. Hammelman, chief, pharmacy service. The authors wish to express their sincere appreciation to the medical illustration service, Veterans Administration Hospital, St. Louis, for the preparation of the photographs.

experimentation

The pharmacy service of the St. Louis Veterans Administration Hospital does not have a sterile solution room. There is a limited area available where a hood or a chamber such as described by Parrott et al.[3] could be placed. Therefore, an easily disassembled hood was constructed and set up in this area (*see Figures 1 and 2*).

The hood consists of a plastic cover placed over an aluminum frame. The plastic cover was originally an oxygen tent and was fitted to the frame. All edges and joints are re-inforced with plastic tape. The hood (*Figure 1*) was fastened to the plastic cover on the table with snap fasteners.

To test the degree in which the hood decreased the possibility of air contamination, environmental control tests[4] were performed on three separate occasions.

The surrounding area and inside of the hood were disinfected with a two percent Amphyl (alkyl and aryl) solution. Three open agar Petri dishes were exposed to the filling area and an equal number of Petri dishes were exposed outside the area. The plates were exposed during the entire time the solution was being filtered and the containers filled. All plates were incubated for 72 hours at 30° to 32°C. The plates were then examined and the colonies counted. The results are recorded in Table I.

Since the bacterial population within the hood (*see Table I*) was greatly re-

Senior information scientist at Norwich Pharmaceutical-Eaton Laboratories and former professor of industrial pharmacy at the St. Louis College of Pharmacy and Allied Sciences, C. Lee Huyck gained his pharmaceutical education at four colleges. He took his undergraduate training at Albany College of Pharmacy, Philadelphia College of Pharmacy and Science and the University of Buffalo. His MS and PhD degrees came from the University of Florida.

Kurt Kleinmann, chief pharmacist at Grant Hospital in Columbus, Ohio, boasts a career in hospital pharmacy that began with his graduation from Rhode Island College of Pharmacy in 1952. It has included military service, two years as staff pharmacist at Johns Hopkins Hospital, and a residency program at the VA Hospital in St. Louis. The residency program was undertaken in conjunction with his masters program at the St. Louis College of Pharmacy and Allied Sciences. Completing that program in June 1959, Kleinmann took over his present post.

duced, the possibility of preparing sterile solutions without the added precaution of ultraviolet irradiation was investigated.

All glassware in contact with the solution to be filtered was autoclaved at 15 pounds pressure at 121°C. for 20 minutes. Glassware was first cleaned with detergent, washed three times with tap water and then rinsed three times with fresh distilled water. Equipment was then assembled on a tray (*see Figure 3*), wrapped in muslin wrappers and autoclaved. The graduate and stoppered Erlenmeyer flask were each wrapped separately. Before the filter was used, it was washed with nitric acid and rinsed thoroughly with distilled water until it was free of acid as tested by litmus. A filter paper was placed over the fritted disc to prevent clogging.

As can be seen in Table II, these solutions are buffered, isotonic and contain a preservative.

Formulas I and II were prepared by dissolving the ingredients in sufficient sterile distilled water to make the required volume. Formulas III and IV were prepared by dissolving the chlorobutanol in sterile distilled water with the aid of a coated magnetic stirrer. The other ingredients were then added to the chlorobutanol solution in the stoppered mixing cylinder and sufficient sterile distilled water was added to bring the solution to the required volume.

The solutions were filtered with the aid of suction (*see Figure 4*). The unit was disassembled and rearranged as shown in Figure 5.

The solution was then transferred aseptically to sterile ten ml. bottles and sealed with plastic bands. A lot number was assigned to each solution and a sample of each was taken for sterility test. To insure that a representative sample of the filtering procedure was chosen, the first and last capped bottles and one bottle halfway through the filtering process were selected for the test. Ten separate batches of ophthalmic solutions prepared over a period of seven months were reported as sterile. To see if sterility is dependent upon the use of an antibacterial agent, solutions of isotonic sodium chloride were prepared using the above procedure. These were found sterile on all occasions.

Samples of several lots of these solutions were set aside under normal storage and refrigerated conditions in the pharmacy to determine the effect of storage on sterility. Results are presented in Table III.

Chlorobutanol 1:200 and benzalkonium chloride 1:5,000 were compared in their ability to destroy Pseudomonas organism in the presence of isotonic buffered ophthalmic solutions prepared according to formulas given in Table II.

All cultures were transferred daily for three days to fresh nutrient broth before being used in the study. In all instances the inoculum consisted of 0.5 ml. of 24-hour undiluted broth culture which was incubated throughout the test at 32°C. The inoculum was added to five ml. of the test solution. A four mm. loop of the suspension of organism was transferred to approximately ten ml. of sterile media after a half-, one-, three-, five-, twenty-four- and forty-eight-hour exposure to the chemical agent. The temperature at which the test was conducted was approximately 24–26°C. (room temperature). The subculture tubes were incubated at 32°C. for seven days before recording the presence or absence of visible growth.

A single inactivating media[5] was used for subculturing the test solutions of benzalkonium chloride and chlorobutanol. The formula of this media is as follows:

Thioglycollate fluid medium	29.5 Gm.
Tween 20	30.0 ml.
Asolectin (lecithin)	2.0 Gm.
Agar	0.5 Gm.
Distilled water	1000.0 ml.
pH 7.0 ± 0.1	

The results of the tests are recorded in Table IV.

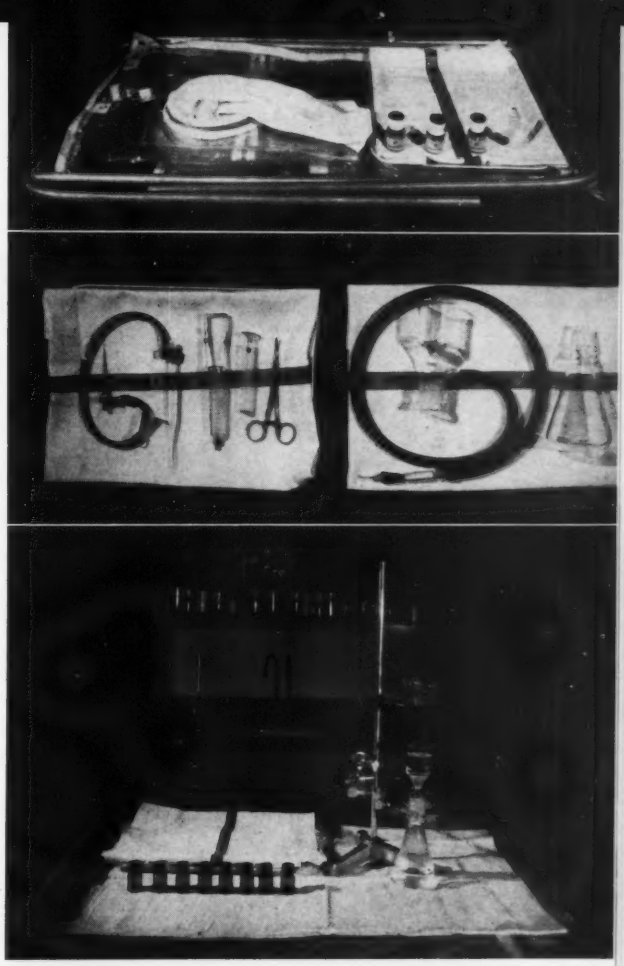


Figure 2—Disassembled hood and finished product.

Figure 3 — Equipment prior to wrapping for autoclaving.

Figure 4 — Filtering of ophthalmic solutions.

discussion

A Morton filter[6] was found effective for filtration. This filter, made of Pyrex glass, has an ultrafine fritted glass disc and an inverted standard taper 29/26 ground glass joint. The unit used consisted of a 250 ml. flask plus a 60 ml. filter (40 mm. disc). A modified version of this apparatus allows the filling of the containers without reassembling the apparatus. In the modified version the rubber tubing leading to the syringe is attached to the outlet at the bottom of the suction flask. When the filter was used, precautions were taken to prevent any previously filtered drug from being transferred to subsequent bottles.

To prevent air contamination during the filtering and filling phase of the operation, an easily disassembled hood was constructed. The materials for such a hood are readily accessible in a hospital and construction relatively simple. The ease with which it can be disassembled allows for increased working area in the pharmacy. Although the use of ultraviolet lamps in addition to the hood would be added protection against microbial contamination, all

Eli Lilly and Company
Indianapolis 6, Indiana, U.S.A.

tool of research

RATTAIL HEAT TECHNIC

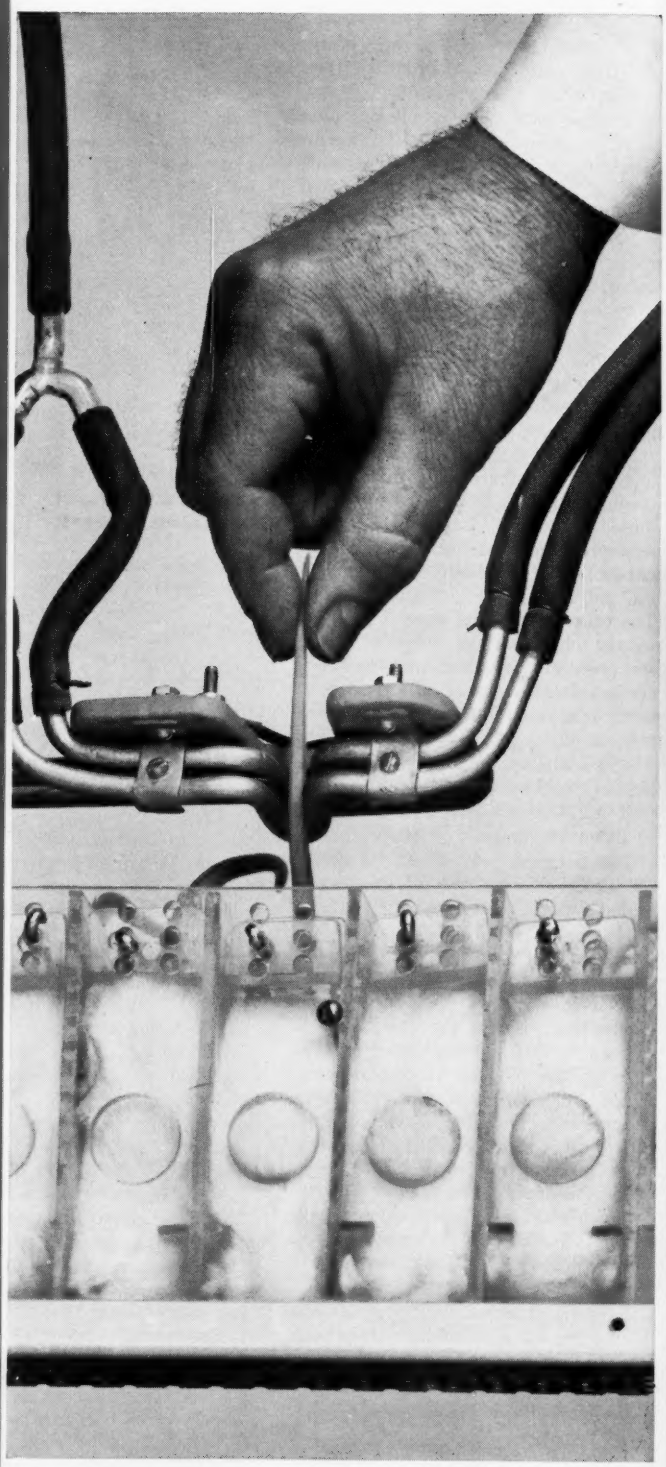
Twenty rats, in groups of four, are used in this modification of the method described by Davies *et al.*[1] The pain stimulus is provided by a heated resistance wire placed near the rats' tails. Direct contact with the hot wire is prevented by a specially designed water-cooled tail rest. Observers record the time interval that animals take to respond (tail jerk) to the heat stimulus.

Untreated rats react within three to six seconds. Any prolongation of this reaction time in animals receiving test medication is an indication of analgesia.

The rattail heat technic is one of many tests used by Lilly scientists to study the analgesic properties of compounds such as Darvon®. This unique analgesic, discovered and synthesized in the Lilly Research Laboratories, is equal to codeine in analgesic action yet has fewer side-effects.

1. Davies, O. L., Raventos, J., and Walpole, A. L.: Brit. J. Pharmacol., 1: 255, 1946.

Darvon® (dextro propoxyphene hydrochloride, Lilly)



Rattail Heat Technic . . . valuable in preliminary screening of drugs for analgesic activity. Specially designed water-cooled tail rest prevents direct contact with hot wire.

■ *When inflammation is present, Darvon combined with A.S.A.® Compound reduces discomfort to a greater extent than does either analgesic given alone.*

products of Lilly research

relief from pain, fever, and inflammation

DARVON® COMPOUND and DARVON COMPOUND-65

Both products combine the analgesic advantages of Darvon with the antipyretic and anti-inflammatory benefits of A.S.A. Compound. Darvon Compound-65 contains *twice* as much Darvon as regular Darvon Compound without increase in the salicylate content or size of the Pulvule®.

Formulas:

Darvon Compound		Darvon Compound-65
32 mg.	Darvon	65 mg.
162 mg.	Acetophenetidin	162 mg.
227 mg.	A.S.A.®	227 mg.
32.4 mg.	Caffeine	32.4 mg.

Usual Dosage: Darvon Compound: 1 or 2 Pulvules three or four times daily.

Darvon Compound-65: 1 Pulvule three or four times daily.

A.S.A.® Compound (acetylsalicylic acid, acetophenetidin, and caffeine, Lilly)
Darvon® Compound (dextro propoxyphene and acetylsalicylic acid compound, Lilly)
A.S.A.® (acetylsalicylic acid, Lilly)

120224

table I

number of colonies counted on three sets of agar plates inside and outside of filling area on three different days.

Filling Area	I	II	III
Inside	4	13	7
Outside	39	95	46

table II—formulas of the solutions

Ingredients	I	II	III	IV	
Pilocarpine hydrochloride	1.00	....	1.00	....	Gm.
Atropine sulfate	....	1.00	....	1.00	Gm.
Sodium phosphate, monobasic	0.46	0.46	0.46	0.46	Gm.
Sodium phosphate dibasic, anhydrous	0.47	0.47	0.47	0.47	Gm.
Sodium chloride[a]	0.16	0.33	0.04	0.21	Gm.
Zephiran chloride (benzalkonium chloride) solution 12.8%	0.16	0.16	....	....	ml.
Chlorobutanol, anhydrous	....	....	0.50	0.50	Gm.
Sterile distilled water *q.s.*	100.00	100.00	100.00	100.00	ml.

[a] Sodium chloride equivalents, E.R. Hammarlund and Kaj Pedersen-Bjergaard, J. Am. Pharm. Assn., 47, 107(1959).

table III—sterility data of ophthalmic solutions

lot no.	solution	date manufactured	date tested	method of storage: rm. temp.	method of storage: refrig. temp.	growth
At-101	Atropine 1% c benzalkonium Cl 1:5,000	6-6-58	3-6-59	*	*	none
At-202	Atropine 1% c chlorobutanol 1:200	6-7-58	3-6-59	*	*	none
Pi-101	Pilocarpine 1% c chlorobutanol 1:200	7-1-58	3-6-59	*	*	none
Pi-102	Pilocarpine 1% c benzalkonium Cl 1:5,000	7-12-58	3-6-59	*	*	none

table IV

time required by benzalkonium chloride and chlorobutanol to produce inactivation of Pseudomonas aeruginosa in experimentally contaminated ophthalmic solutions.

drug	Benzalkonium chloride 1:5,000, min.	chlorobutanol 1:200, min.
Atropine sulfate 1%	30	30
Pilocarpine hydrochloride 1%	30	180

solutions prepared were found sterile without the use of such lamps.

The data in Table III indicate that ophthalmic solutions can maintain sterility for long periods of time if they are prepared in a sterile manner. Although the solutions stored at room temperature maintained sterility, it still is desirable to store them in the refrigerator where the temperature is not optimal for growth of bacteria.

Contaminating the solutions showed that benzalkonium chloride 1:5,000, even at a pH below 7, is somewhat more effective than chlorobutanol 1:200. Although only one strain of Pseudomonas was employed in this study, the results are in agreement with Lawrence.[7]

Further study is indicated to determine the effectiveness of the preservatives in these solutions once they are dispensed to the services of the hospital.

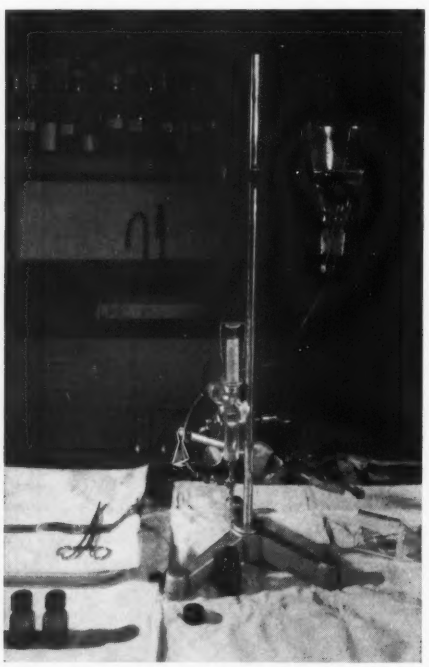


Figure 5 — After the solutions were filtered, the unit was disassembled and rearranged for filling the final container.

summary

An easily disassembled hood was constructed consisting of a plastic cover placed over an aluminum frame. Ten batches of ophthalmic solutions were prepared using the hood without ultraviolet irradiation according to the described procedure. All were found to be free from bacteria.

The method of storage did not affect the solutions as far as sterility is concerned.

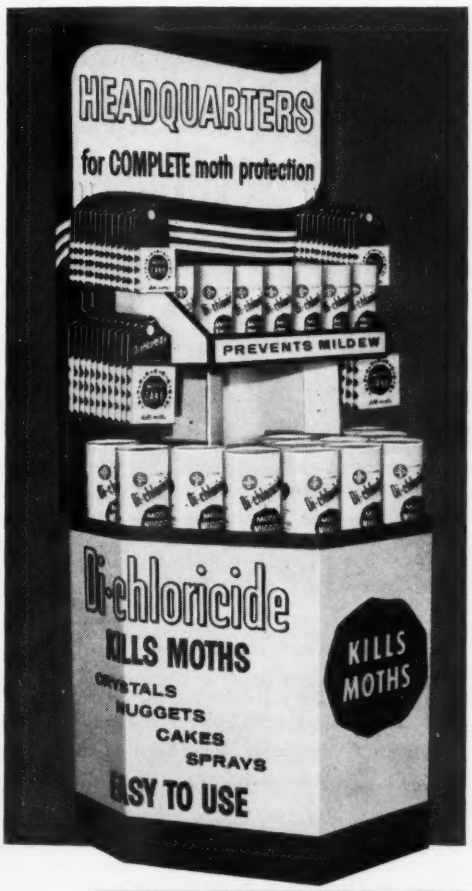
The preservatives rendered the solutions free from bacteria when contaminated with Pseudomonas aeruginosa. However, benzalkonium chloride 1:5,000 as a preservative was found to be somewhat faster acting than chlorobutanol 1:200.

References

1. Riegelman, S., and Vaughan, Jr., D.G., THIS JOURNAL, 19, 474, 537, 665(1958).
2. Tozer, G.A., *Am. Professional Pharm.*, 25: 30(1959).
3. Parrott, E.L., Wurster, D.E. and Busse, L.W., THIS JOURNAL, 14, 645(1953).
4. Martin, E.W. and Cook, E.F., *Remington's Practice of Pharmacy*, 11th edition, Mack Publishing Co., 1956, p. 310.
5. Armbuster, E.H. and Ridenour, G.M., *Soap and Sanitary Chemicals*, 23, 119(1947).
6. Jeffrey, L.P., *Bul. Am. Soc. Hosp. Pharm.*, 13, 32(1956).
7. Lawrence, C.A., J. AM. PHARM. ASSN., *Sci. Ed.*, 44, 457(1955).

Di·chloricide®

VOLUME AND PROFITS GOING UP...UP...UP



1. Make up to 40% profit on Di-Chloricide bonus goods deal. Buy 11 of any Di-Chloricide moth product and get 1 free. Deal expires May 31.
2. Earn an extra 15% discount off list prices with original case orders that total $200.00 or more. Ask your Merck Wholesaler for details.
3. Boost your sales with new floor stand display shown here. It's yours with an order of $50.00 or more. You receive display after sending proof of purchase to Merck.

For profitable consumer products, prescription chemicals and narcotics—CALL YOUR MERCK WHOLESALER

MERCK

CONSUMER PRODUCTS DEPT.
MERCK & CO., INC. • RAHWAY, NEW JERSEY

(*Continued from page 157*)

by-laws

present

CHAPTER I.—MEMBERSHIP

Article I. Kinds of Membership. In accordance with Article III of the Constitution, the Council may elect active, associate, life and honorary members of the ASSOCIATION.

Article II. Active Members. Any pharmacist of good professional standing is eligible to active membership. The Council may at its discretion grant membership to reputable nonpharmacists who are desirous of advancing the interests of pharmacy, and who are informed concerning the aims of the ASSOCIATION and willing to accept the obligations imposed by membership. The annual fee for active membership shall be determined by the Council.

Active members may vote at the annual sessions of the ASSOCIATION and participate in the election of the general officers.

Article III. Associate Members. Any student, undergraduate or graduate, regularly enrolled in any school or college of pharmacy, holding membership in the American Association of Colleges of Pharmacy or accredited by the American Council on Pharmaceutical Education, and having a duly organized Student Branch of this ASSOCIATION, may, upon application, be elected an associate member. The fee for such membership shall be set by the Council. Graduate students, who devote at least one-half of their time to graduate study, may elect to continue as associate members until completion of graduate studies. Associate members shall not be entitled to vote nor to hold office, except in Student Branches.

Article IV. Life Members. Upon approval by the Council any person meeting the qualifications for active membership may be granted life membership under the following alternative conditions: (1) If he has been an active member and paid annual dues for forty consecutive years. (2) If he pays the life membership fee determined by the Council. Life members, who are exempt from all annual dues, shall continue to enjoy the privileges of active membership and shall receive the services and publications provided to active members.

(In accordance with the foregoing By-Law the Council has passed the following rule, effective January 1, 1961: Any person who meets the qualifications for active membership in the ASSOCIATION and who shall pay the sum of $375, and also any active member not in arrears who after ten years shall pay the sum of $300, or after fifteen years the sum of $225, or after twenty years the sum of $180, or after twenty-five years the sum of $110, may become a life member.)

Upon the death or resignation of a life member, the life membership fee paid by such member shall be transferred from the life membership fund to the general fund of the ASSOCIATION.

Article V. Honorary Members. Professional and scientific workers of note and other persons of distinction who are recommended to and approved by the Council may be elected to honorary membership. They shall not be required to pay dues, nor shall they be eligible to hold office or to vote.

Article VI. Election. Membership Year. Each application for membership shall bear the endorsement of two active members of the ASSOCIATION in good standing and shall be accompanied by the dues for at least one year. A two-thirds vote of the Council is required for election to any class of membership.

The period of membership shall be one year from the first day of the month immediately following the date of election, and may be renewed for like periods by the further payment of the annual dues.

Each member shall pay in advance the annual dues of the class to which he belongs.

(Articles VII to X of the present By-Laws are to be renumbered without change as Articles IX to XII in the recommended By-Laws.)

recommended

CHAPTER I.—MEMBERSHIP

Article I. Membership Categories.

1. In accordance with Article III of the Constitution, the Council may elect active, associate, student and honorary members of the Association.

2. The Council may elect life members through December 31, 1961 in accordance with the provisions of the By-Laws effective December 31, 1960.

Article II. Active Members.

1. Any pharmacist of good professional standing is eligible for active membership. For the purpose of these By-Laws, a pharmacist is defined as anyone licensed to practice pharmacy or an individual not licensed but who has an earned degree in pharmacy.

(Active members at the time this Article is adopted shall continue to maintain their status as active members without regard to the above qualifications.)

2. An active member in good standing shall be eligible for election or appointment to any office of this Association except as otherwise provided in these By-Laws.

3. An active member in good standing shall be eligible to vote at the annual sessions of the Association and in the mail ballots and participate in the election of the general officers.

Article III. Associate Members.

1. Any reputable individual, who is not eligible for active membership, but who is desirous of advancing the interests of pharmacy, and who is informed concerning the aims of the Association and willing to accept the obligations imposed by membership, is eligible for associate membership.

2. An associate member in good standing shall be eligible to hold office and to vote only in those Sections in which he is entitled to membership.

Article IV. Student Members. Any student, undergraduate or graduate, regularly enrolled in any school or college of pharmacy, holding membership in the American Association of Colleges of Pharmacy or accredited by the American Council on Pharmaceutical Education, and having a duly organized Student Branch of this Association, is eligible for student membership.

Student members shall not be entitled to vote nor to hold office, except in Student Branches and the Student Section.

Article V. Life Members. Life members elected prior to December 31, 1961 shall be exempt from all annual dues, and shall continue to enjoy the privileges of active membership and shall receive the services and publications provided to active members.

(Active members at the time this Article is adopted shall be eligible to qualify for life membership prior to December 31, 1961.)

Upon the death or resignation of a life member, the life membership fee paid by such member shall be transferred from the life membership fund to the general fund of the Association.

Article VI. Honorary Members. No change.

Formerly Article V.

Article VII. Election. Membership Year. Each application for membership shall contain that information required by the Council, shall be accompanied by dues for at least one year. A two-thirds vote of the Council is required for election to any category of membership.

Article VIII. Dues.

1. Each member shall pay in advance the annual dues determined by the Council for the category to which he belongs.

2. Any active or associate member in good standing for twenty or more years who is in a retired status is eligible, on application to the Council, for transfer to retired status in his original category. Members in the retired status shall retain all privileges of their original membership category, and shall pay in advance the annual dues determined by the Council for such members.

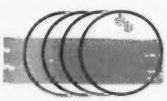
(*Continued on page 170*)

Professional Crestware COFFEE SERVICE

free with your order of Owens-Illinois Prescription Vials and/or squares

Beautiful china automatic electric coffeemaker, 8-cup capacity, free with 40-case order of vials and/or squares.

Four china coffee mugs, free with 10-case order of vials and/or squares.



Four 10-inch china plates, free with 10-case order of vials and/or squares.

These handsome gifts . . . electric coffeemaker, coffee mugs and plates . . . are perfect for coffee breaks at the store, entertaining your doctor friends or as tableware in your own home.

Gift offer good only in U.S.A. To qualify, retailer must send invoice to Prescription Ware Division, Owens-Illinois, Toledo 1, Ohio. Only invoices *dated* from February 27 through April 7, 1961, will be honored.

PRESCRIPTION CONTAINERS
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO
PACIFIC COAST HEADQUARTERS • SAN FRANCISCO

present (continued)

CHAPTER II.—ELECTION OF OFFICERS

Article I. Nomination of President, Vice-President, Councilors, Chairman, and Vice-Chairman of the House of Delegates. The Secretary shall present to the Nominating Committee a list of active and life members who have been members of the AMERICAN PHARMACEUTICAL ASSOCIATION in good standing for not less than three years. From this list the Nominating Committee shall present to the second session for approval by the House of Delegates three candidates, one of whom shall be, as hereinafter provided, elected President to serve for one year, three candidates for First Vice-President, one of whom shall be elected for one year, three candidates for Second Vice-President, one of whom shall be elected for one year, and nine candidates for Councilor, three of whom shall be elected for three years, and one candidate for each of the offices of Chairman, and Vice-Chairman of the House of Delegates who shall be members of the House of Delegates. No person shall be nominated for the office of Councilor who shall have been elected to this office for two consecutive terms unless one convention shall have been held between the end of his second term and the beginning of the term for which he is nominated. The Council is empowered and directed to fill all vacancies in the list of candidates, which may occur by death or resignation, after the adjournment of the Annual Meeting of the ASSOCIATION and prior to the issuance of mail ballots, and having due regard for the conditions of eligibility hereinabove set forth.

Article II. Election of Officers. The names of the candidates for ASSOCIATION officers shall be submitted by mail to every dues-paid, active member of the ASSOCIATION by the Secretary within two months after their nomination, together with a request that the member indicate on a ballot enclosed for that purpose his choice of candidates for the offices to be filled and return the same by mail within thirty days of the date printed on the ballot. The officers of the House of Delegates shall be elected as provided in the By-Laws of the House of Delegates.

Article III. Counting the Ballots. The ballots received within thirty days of the date printed on the ballots are to be delivered by the Secretary to the Board of Canvassers, who shall count the votes of active, dues-paid members only, and shall in turn certify to the Secretary the result of the election, after which the names of the successful candidates shall be published in the JOURNAL of the ASSOCIATION.

CHAPTER VI.—LOCAL BRANCHES AND STUDENT BRANCHES

Article II. The Student Branches of the American Pharmaceutical Association.

(*c*) Members of a Student Branch shall be known as Junior Members of the AMERICAN PHARMACEUTICAL ASSOCIATION until they have completed the requirements for the degree in Pharmacy.

CHAPTER XIII.—AMENDMENTS

Article I. Amendments. Every proposition to alter or amend these By-Laws shall be submitted in writing at a general session, referred to the Committee on Constitution and By-Laws for report, and may be balloted upon at any subsequent general session, when, upon receiving the votes of three-fourths of the members present and voting, it shall become a part of the By-Laws.

recommended (continued)

CHAPTER II.—ELECTION OF OFFICERS

Article I. Nomination of President, Vice-President, Councilors, Chairman, and Vice-Chairman of the House of Delegates.

1. The Secretary shall present to the Nominating Committee a list of active and life members who have been members of the American Pharmaceutical Association in good standing for not less than three years. From this list the Nominating Committee shall present to the second session for approval by the House of Delegates, two candidates, one of whom shall be, as hereinafter provided, elected President to serve for one year, two candidates for First Vice-President, one of whom shall be elected for one year, two candidates for Second Vice-President, one of whom shall be elected for one year, and six candidates for Councilor, three of whom shall be elected for three years, and one candidate for each of the offices of Chairman, and Vice-Chairman of the House of Delegates who shall be members of the House of Delegates.

2. No person shall be nominated for the office of Councilor who shall have been elected to this office for two consecutive terms unless one convention shall have been held between the end of his second term and the beginning of the term for which he is nominated.

3. The Council is empowered and directed to fill all vacancies in the list of candidates, which may occur by death or resignation, after the adjournment of the Annual Meeting of the Association and prior to the issuance of mail ballots, and having due regard for the conditions of eligibility hereinabove set forth.

Article II. Election of Officers. The names of the candidates for Association officers shall be submitted by mail to every member of the Association eligible to vote by the Secretary within two months after their nomination, together with a request that the member indicate on a ballot enclosed for that purpose his choice of candidates for the offices to be filled and return the same by mail within thirty days of the date printed on the ballot. The officers of the House of Delegates shall be elected as provided in the By-Laws of the House of Delegates.

Article III. Counting the Ballots. The ballots received within thirty days of the date printed on the ballots are to be delivered by the Secretary to the Board of Canvassers, who shall have counted the valid votes and shall in turn certify to the Secretary the result of the election, after which the names of the successful candidates shall be published in the Journal of the Association.

CHAPTER VI.—LOCAL BRANCHES AND STUDENT BRANCHES

Article II. The Student Branches of the American Pharmaceutical Association.

(c) Members of a Student Branch shall be known as student members of the American Pharmaceutical Association.

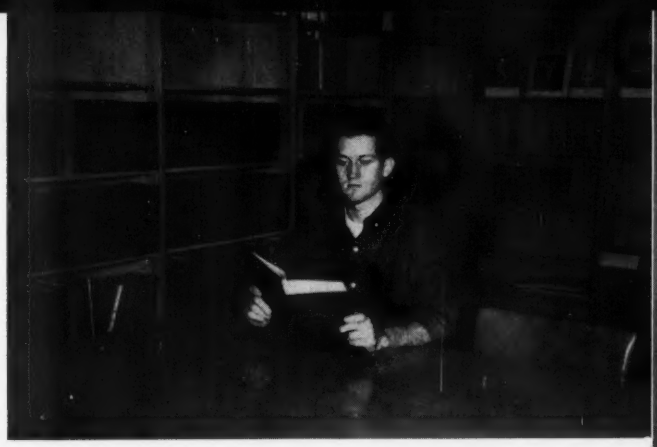
CHAPTER XIII.—AMENDMENTS

1. Every proposition to alter or amend these By-Laws shall be subject to one of the following procedures:

a. It shall be read at a General Session of the annual meeting, and shall be balloted upon at a subsequent General Session when, upon receiving the affirmative votes of three-fourths of the active and life members voting, it shall become a part of these By-Laws; or

b. It shall be mailed to the active and life members of the Association together with a mail ballot in which their vote may be recorded and returned within thirty days of the date printed on the ballots, and upon receiving the affirmative votes of three-fourths of the eligible voting members, it shall become a part of these By-Laws.

2. The selection of the procedure to be used shall be at the discretion of the Council.



At school and at home—(clockwise) Jay Arnette studies in the library of the school of pharmacy, shows his Olympic gold medal to his father and mother and poses with his trophies on the mantelpiece of the fireplace at his home.

in sports and pharmacy

Jay Arnette—professional

by Harold D. Powell

Future pharmacist and Los Angeles Dodger—meet Jay Arnette, Olympic gold medal winner and junior in pharmacy school at the University of Texas.

To Texans Jay's activities are outstanding in today's sport news and they have made him a national sports figure. Since high school his amateur sports participation has gained him all-conference basketball and baseball titles and a position on the 1960 U.S. Olympic basketball team which won the gold medal in Rome by defeating the Russian team. Now at 22 Jay has turned professional and has signed a baseball contract with the Los Angeles Dodgers.

But even this publicity and the prospect of a baseball career in a major league has not deterred Jay from his studies. This talented young man continues to prepare, quietly and devotedly, for his profession, a career in pharmacy which will be to him equally as rewarding as a sports career.

Jay plans to continue his scholastic studies each fall semester until his degree is completed. His decision to enter pharmacy was undoubtedly influenced, Jay admits, by his father, Joe Arnette, a pharmacist, now serving as secretary of the Texas State Board of Pharmacy. However, he emphasizes that his success in sports has only accentuated his desire to prepare for his pharmaceutical career.

Comments Jay—

> It will be reassuring to know that I can be a member of an honored profession during the off season in sports—and also after my athletic ability has declined.

To students entering college and pharmacy in particular, Jay offers this advice—

> The most important thing is to plan your course program carefully from the beginning and stick with it. Otherwise you may lack the proper pre-requisite to advance.

And what about combining sports and study? On that Jay says—

> It is difficult to make top grades but I can find time to study in spite of the rapid pace of sports participation. The laboratory courses present a problem because sports demand the afternoon time.

In spite of these difficulties, however, Jay manages his courses and his sports in such a way that he also has time for other extracurricular activities such as membership in Phi Kappa Psi and the University of Texas Cowboys and Goodfellows. In his sophomore year he was also elected president of his class.

Modestly discussing the highlights of his sports career to date, Jay points to two Southwest Conference baseball titles and one basketball title as among his greatest thrills. But he adds—

> If I were to name only one outstanding event, I would probably choose our defeat of the Russian Olympic basketball team in Rome, although I certainly cherish the honor of my selection as "Texas Amateur Athlete of the Year."

Although his full schedule and activities are not typical of the average college student's routine, Jay stresses that an "interest in sports need not interfere with one's desire to complete a degree in pharmacy. Too many high school athletes avoid pharmacy and other sciences because they think the courses would be too difficult." ●

Legal Blotter

exempted from Rx requirements—bacitracin-neomycin-polymyxin powder

■ Petitioned by Burroughs Wellcome and Company, Inc., FDA amended the regulations for the certification of bacitracin and bacitracin-containing drugs. The amendment provides for the sale of bacitracin- (and zinc bacitracin-) neomycinpolymyxin powder topical, intended for human use, without the prescription of a physician but labeled with directions and warnings for non-prescription use. In addition 146e.430 requires that when such drugs contain only antibiotics as active ingredients, they clearly carry on their labels the information they are for use only in the prevention of infection in minor cuts, minor burns and abrasions and, further, that the use of the drugs should be discontinued and a physician consulted if signs of infection or irritation appear.

misuse of salesmen's samples

■ The New York State Board of Pharmacy expressed concern with the misuse of salesmen's samples intended for distribution to physicians. Such samples often include barbiturates, antibiotics and other potent medicinal agents, many of which carry expiration dates.

Kenneth S. Griswold, secretary of the board, reported a case in which a wholesaler relied almost entirely on physicians' samples to carry on his operation. The wholesaler had appeared before a violations committee of the board on two occasions and was scheduled to appear again before a subcommittee to show cause why his certificate should not be suspended or revoked.

The board points out that salesmen are actually selling samples or using them to "buy business" and that such a practice may be considered as an alleged violation because the salesmen involved are not licensed by the board to sell drugs unless they are acting as an agent for the manufacturer.

While the board noted that a few physicians' samples, in one way or another, do come to rest on prescription department shelves, it warned that these samples should be left in their original containers which carry on the labels control numbers and often expiration dates. When they are removed from their original containers, the various lots are mixed, control numbers and expiration dates are eliminated and new labels may be faulty. The sale and distribution of such medicinal agents then becomes a menace to public health.

The board commended a policy of tight control by manufacturers over the distribution of drug samples citing one policy in which detail men are required to sign statements pledging to distribute sample products properly, never to sell or exchange samples and to take precautions against the possibility of pilfering or access to drugs by unlicensed persons.

The board also states that the enforcement program on the improper use of physicians' samples will be vigorously pursued.

hazardous substances labeled by August 1

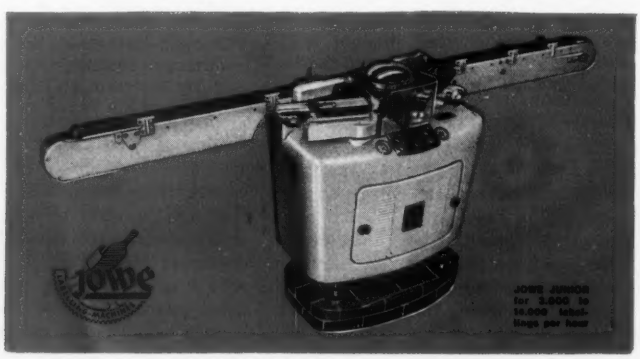
■ FDA has extended the effective date of the enforcement provisions of the Federal Hazardous Substances Labeling Act until August 1, except for products which are highly toxic, extremely flammable and flammable. Effective date for these provisions was February 1. Manufacturers were urged to utilize the time between now and August 1 to bring their products into full compliance with the act. The Federal Caustic Poison Act remains in full force and effect during the extension as to any article affected by the extension. The new law provides for cautionary labeling, together with information as to the composition of these products, a statement of the principal hazard or hazards, precautionary measures to be taken, instructions, when necessary for emergency treatment in case of misuse and instructions to keep the articles out of the reach of children.

supervised sales for drug products

■ The New York State Board of Pharmacy has prohibited the sale of medicinal preparations through non-drug outlets if they contain any one of 15 different drug ingredients. Preparations which contain one or more of these ingredients may be sold to the public in registered pharmacies only under the supervision of a registered pharmacist. The 15 ingredients which place a drug on the supervised sales list are amphetamine, antibiotics, antihistaminic drugs, antipyrine, atropine or derivatives, bromides, caramiphen ethane-disulfonate, carbentapentane, carbon tetrachloride, dextromethorphan, ephedrine, hyoscine (scopolamine), ipecac (emetine), phenylephrine and theophylline.

advertising limitations

■ In Wisconsin new rules of the state board of pharmacy prohibit the pharmacist, proprietor or manager of any pharmacy from advertising "in any manner, the availability of dangerous drugs by name" or "in any manner prices to be charged for prescription medication, either specifically or as a percentile of prevailing prices." The rules went into effect February 1.



NEW

the most modern high speed labelling machine for the pharmaceutical industry is glueing paper labels or applying thermoplastic labels and coding them automatically
Front labels, front and back labels as well as wrap-around labels can be fixed by this machine.
For further details please contact:
JOHANN WEISS GMBH · Berlin N65 · Germany
Telex Jowe Berlin 018 3676

Coupon T17

Please send
an estimate for _____ labellings/hour to
Company _____
Street _____
Town _____

CORIFORTE Capsules

(formerly CORICIDIN FORTE)

Schering

quickly relieve mild to severe U.R.I. symptoms

rapidly relieve **sneezing, nasal stuffiness, tearing**

reduce **fever and chills,** ease **aches and pains**

lift **depressed feelings**

Heavy detailing, advertising under way!

DRUG LIST

bottle of 100.....$ 4.50

bottle of 1000...$40.50

available on prescription only

Each CORIFORTE™ capsule contains:

CHLOR-TRIMETON® Maleate (chlorpheniramine maleate)	4 mg.
Salicylamide	0.19 Gm.
Phenacetin	0.13 Gm.
Caffeine	30 mg.
Methamphetamine Hydrochloride	1.25 mg.
Ascorbic Acid	50 mg.

SCHERING CORPORATION • Bloomfield, New Jersey

Pharmacy Today

student branches

District 2 convention

●District organization of student branches was slated for main topic of discussion at 1961 convention of **District 2** student branches, February 18, at U. of Pitt. Other topics—planning meetings, membership program (pilot project of PCPS), reports and a look at future of pharmacy.

APhA alert

●Structure of APhA detailed by William S. Apple, sec'y APhA, at Feb. meeting of **St. John's** student branchers. . . . ●**Howard U.** student branchers in Washington, D.C. heard discussion on organization of APhA by Milton L. Neuroth, chmn. dept. of pharm. and pharmacology, Med. Col. of Va.

from the polls

●Gaveling meetings of student branchers for coming year at **U. of Florida** will be Miller Merchant, pres. Serving with him—v. pres., Bob McCurdy; sec'y, Vincent Perez; treas., Lois Adams. Plans include pharm. exhibit for engineer's fair. . . . ●In exec. capacity at student branch, **St. Louis Col. Pharm. and Allied Sciences,** are Casimir Sawalski, pres.; Glenn Lonhart, v. pres.; Martin Nadel, sec'y; Anna Mae Barwick, treas.

on membership

●Membership increase drive planned by **PCPS** branch, in Jan. spearheaded by Andrew Ferrara and Fred M. Eckel, sr. pharm. students.

pharmacy overseas

●**Auburn U.** student branchers in Jan. heard Gennedy M. Kosolapoff, chem. prof., explain pharm. and chem. in Russia. . . . ●Essential oils of Africa documentary viewed by **Fordham U.** branchers in Feb.

of drugs and glass

●Professional dignity in pharm. emphasized by APhA pres., Ronald V. Robertson, at Jan. meeting **Oreg.-APhA** student branch. . . . ●Demonstration in glass blowing given for student branchers at **S.Dak.** State Col. in Feb. by John Tanaka, chem. instr. . . . ●Proper dispensing of narcotics stressed by Lt. George L. Kelly of N.J. narcotic squad at **Rutgers** student branch meeting in Feb.

local branches

professional pricing

●At **Chicago** and **N.Y.** local branches William S. Apple, APhA sec'y, spoke on price of professional survival in Feb. . . **Lewis-Clark** (Idaho) local branchers discussed changes in pricing and professional fee concept.

scientific side

●At **Philadelphia** branch Dean Linwood F. Tice of PCPS gave commentary on new drugs of 1960. . . . ●Pharm. as science rather than art stressed at **N.Y.** branch panel session in Jan. . . . ●"Psychological Aspects of Cancer" viewed by **Memphis** branchers at Jan. meeting. Resolution adopted to secure fluoridation of Memphis water supply. . . .

ballot results

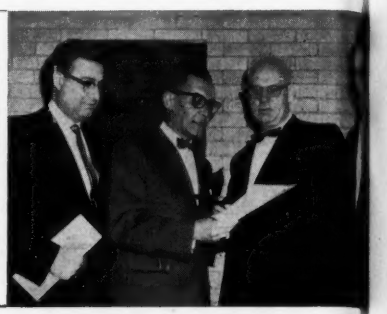
●Heading **N.Calif.** APhA branch in 1961 are Morris Boynoff, pres.; Victor Boisseree, v. pres.; Wilson Dep, sec'y; Stephen J. Dean, Jr., treas. Group took over Jan. 18. New pres. stressed plans for increasing membership, need for interprofessional communication and PR. . . . ●Exec. turnovers at **N.Y.** branch make E.E. Leuallen, pres.; A.J. Bartilucci, v. pres.; H. Kaye treas., and F.J. Pokorny, sec'y.

board session

●Strictly business was the Jan. meeting of **N.Calif.** branch bd. of dir. Stress on local projects, obtaining more student participation.

seminar series

Chatting before Victor Cabasso of Lederle gave his talk on "Oral Poliomyelitis Vaccine" at the first lecture of the 17th annual seminar series for pharmacists at the New Jersey State University pharmacy college, February 1, are Anthony F. Siro, Victor J. Cabasso, Rutgers Dean Roy A. Bowers and John McCormack. The series is sponsored by the Northern New Jersey APhA branch and Rutgers pharmaceutical extension service.



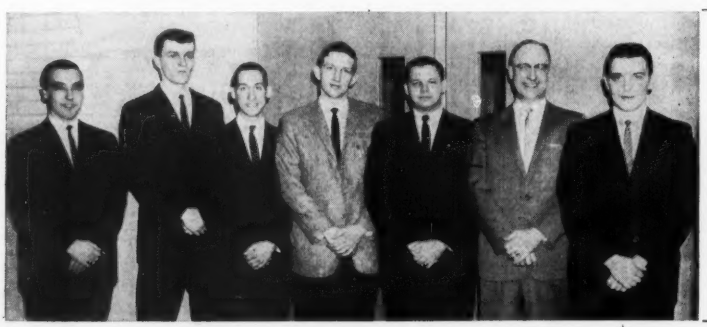
associations

professional and public

●Calif. and Wis. groups emphasize good prof. and pub. relations. Two meetings in Wis. in Mar. (**Kenosha Med. Soc.** and **Racine PhA**) find physicians and pharm. getting together; two sessions (**Brown Co. Druggists Assn.** and **Outagamie PhA**) join dentists and pharmacists in discussions. . . . ●Speaking for **Calif. PhA** Jack Boyle addressed Wilshire Center Lions Club on drug prices in Feb.; same topic was subj. of talk by Eugene Elkin, pres. **Riverside Co. PhA,** before Banning Kiwanis. . . . ●**Pomona Valley PhA** begins 5th yr. of emergency Rx night call service. Pharm. member of assn. on call all night to fill any emergency med. or dent. Rx.

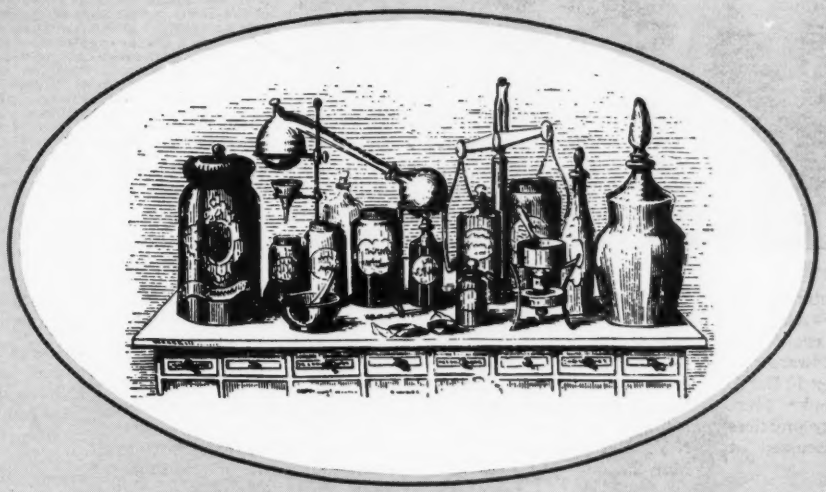
cross section

●Current problems in pharm., entertainment and a banquet gained limelight at **Mich. State PhA** midseason meeting. Sessions held at Saginaw, Feb. 1–2. . . . ●Contemporary health care issues and problems of community pharm. headlined **NJPhA** annual midwinter meeting, Jan. 25. Dinner-dance honored Joseph Mittuch, pres. . . . ●"Our Miss Brooks Nite," sponsored by **Travelers Aux. DCPhA,** honored M. Eileen Brooks, exec. sec'y of assn. Honoree received plaque, honorary life membership in TA, U.S. savings bond from local wholesale drug houses. TA also announced scholarship award established at GW school of pharmacy. . . . ●Nuclear physics and submarine



at Ferris Institute

Ferris Institute student branchers heard Robert Johnson, Michigan State Pharmaceutical Association secretary speak on the need for student branch organization at the February meeting. Among those attending the session were student branch officers and advisors including Robert DiCenzo, advisor; Ron Porter, treasurer; James Lichon, president; Don Stansloski, vice president; Robert Johnson; Dean E. P. Claus of Ferris and Robert Willette, advisor.



COMMON SENSE *vs.* NONSENSE

one of a series of classic quotations dealing with subjects of interest to you

"It's unwise to pay too much, but it's worse to pay too little. When you pay too much, you lose a little money—that is all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do. The common law of business balance prohibits paying a little and getting a lot—it can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run, and if you do that you will have enough to pay for something better."

—John Ruskin
(1819-1900)

SMITH KLINE & FRENCH LABORATORIES, PHILADELPHIA

MCP marks 138 milestone

More than 250 alumni and friends of the Massachusetts College of Pharmacy attended the observance of the 138th anniversary of the founding of the college on January 10 and launched a general campaign to raise $900,000 for construction in 1961. Discussing the details of the new college development program designed to expand facilities and service of the college are (left to right) William T. Shea, president, Massachusetts State Pharmaceutical Association; Leonard F. Tibbetts, chairman, development committee; Dean Howard C. Newton; Louis Doodlesack, 1960 president, Alumni Association; John W. Webb, president, Massachusetts Society of Hospital Pharmacists; William E. Hassan, Jr., associate director, Peter Bent Brigham Hospital.

medicine, top interest at **Pharm. Wholesaler's Assn.** annual conv. in Las Vegas, Mar. 15–18. Physicist Edward Teller and Cmdr. George F. Bond, physician, will speak. Med. and pharm. industry practices expected to be discussed at session.

pharmacy board notes

●Philip E. Cowan, v. pres. Detroit Medical Arts Pharmacy Inc., appointed to **Mich. State Bd. of Pharm.** Jan. 11. . . . ●In Indiana H.E. Laughlin, APhA and ACA member, made member of **State Bd. of Pharm.** . . . ●Kenneth S. Griswold, sec'y, **N.Y. State Bd. of Pharm.,** was guest of honor at 64th annual dinner of N.Y. Ret. Druggists Assn., Mar. 25.

Philip E. Cowan

H.E. Laughlin

new executives

●Slated to take over leadership of **S.E. Soc. Hosp. Pharm.**—Howard Clem and Owen L. Crutcher, new pres.-elect and v. pres.-elect. . . . ●Dr. Charles H. Patton, Amer. Dent. Assn. pres., chosen chmn. **Joint Council to Improve Health Care of Aged;** Howard I. Wells, Jr., exec. sec'y of Jt. Council, re-elected sec'y-treas.; Dr. Leonard W. Larson, AMA pres.-elect, selected new v. chmn. . . .

for public health

●Pub. health scheduled for pharm. spotlight in Wis. **Winnebagoland PhSoc.** will look at legislative approaches to pub. health on Mar. 16 and **Brown Co. Druggist Assn.** will learn how recent tax law changes affect pharm. on Apr. 6.

colleges
continuing education

●Dosage forms and medication costs will have stage at annual pharm. congress, Mar. 17, at **St. John's U.** Chairing panel from industry on dosage forms—Charles I. Jarowski, mgr. pharm. res. and dev. at Pfizer. Frederick D. Lascoff will moderate panel on costs. Other panelists—Edmund Beckwith, Jr., Robert E. Abrams, Ben Miller. Luncheon speaker—Austin Smith, PMA pres. . . . ●Grad. seminar for pharm. at **Brooklyn Col. of Pharm.** (Feb. 16–Mar. 23) discussing community pharm. in NYC area. 6-session course under direction of Paul C. Olsen, dir. marketing res. for *Drug Topics* and *Drug Trade News*, covers history, competition costs and profits, Rx drugs and med. care cost, legal aspects of practice of pharm. . . . ●Seminar on modern pharm. slated for May 9–10 at **Butler U.** will feature discussion of Rx pricing, prepd. Rx insurance, pharm. and shopping center, 5-yr. curriculum, civil defense, solid-dosage forms identification and cardiovascular diseases. Dinner speaker will be APhA's sec'y, William Apple. His topic—"Pharm. on Wash. Front." . . . ●Circle date for pharmacist's calendar—September 17–20, 1961. Ext. services in pharmacy and school of pharm. at **U. of Wis.** plan first annual conf. on pharmaceutical analysis on that date. Registration limited by application. Fee and accommodations, $125. Contact Richard S. Strommen, 301 Pharmacy Bldg., U. of Wis., Madison. . . . ● Two evening courses on theoretical basis and practical applications of fundamentals of cosmetic technology offered by **Columbia U.** col. of pharm. Feb. 15–May 17.

honors and appointments

●George F. Archambault, chief pharm. branch, div. of hosp., U.S. Health Service, will receive honorary LLD on March 23 from **Temple U.** as part of school of pharm.'s 60th anniversary celebration. Honorary DSc will be conferred on Albert B. Sabin, developer of oral live-virus polio vaccine. Anniv. prog. also includes symposium on res. operations, community pharm., retirement for pharm. . . . ●Recipient of 1961 Rusby Award Elmer H. Bobst, chmn. bd. Lambert Pharmaceutical Co. to receive honor for outstanding leader-

Elmer H. Bobst

hospital pharmacy seminar

Flanked by the seminar committee of the Dade County Society of Hospital Pharmacists is Elbert E. Voss (center) of the college of pharmacy, University of Florida. Voss was one of six medical and pharmaceutical experts who spoke on various aspects of health at a pharmacy seminar conducted by the Dade County Society in Miami, January 29. From left to right are David M. Fisler, Mary Wernersbach, Voss, Virginia Yearick and Carl M. Dell.

CAREERS *in* *Professional* PHARMACY

offer unlimited opportunities to young men and women completing five year B.Sc. program of study all within this independent institution, oldest yet most modern of its kind in the Americas. Selected graduate studies leading to M.Sc. and Ph.D. degrees. Schools of Bacteriology, Biology and Chemistry also. Applications now considered after 3½ years of high school—acceptance dependent upon successful graduation. Many undergraduate activities. Residence hall for women. Write for free catalog.

Philadelphia College
OF PHARMACY AND SCIENCE

43rd St., Woodland and Kingsessing Aves. Philadelphia 4, Penna. Founded in 1821

Dependable
Pain Reliever

Professional confidence in the uniformity, potency and purity of Bayer Aspirin is evidenced by ever increasing recommendation. Today Bayer Aspirin is the most widely accepted brand of analgesic in the world.

We welcome your requests for samples of Bayer Aspirin and Flavored Bayer Aspirin for Children.

THE BAYER COMPANY, DIVISION OF STERLING DRUG INC., 1450 BROADWAY, NEW YORK 18, N.Y.

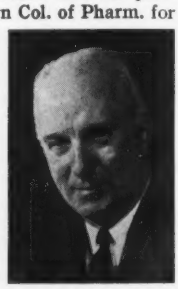
Doerr, Smith new AFPE executives

●Charles D. Doerr, sr. v. pres. of McKesson & Robbins, Inc., was elected pres. of AFPE at 19th annual meeting in New York, January 24. George F. Smith, former pres. of J&J, became v. pres. Re-elected to their posts were treas., Carl K. Raiser, ass't to SKF pres.; counsel, James F. Hoge, Rogers, Hoge & Hills, and sec'y, W. Paul Briggs.

Budget of $264,500 for educational projects approved for 1961–62. Budget covers graduate fellowships, undergraduate scholarships and support of ACPE, pharm. teachers' seminars, *Amer. Jnl. of Pharm. Educ.* and pharm. student recruitment programs.

During past year AFPE has maintained 71 grad. fellowships in 26 univs., and provided scholarships for 194 pharm. students in 65 colleges. Foundation administers E.L. Newcomb memorial wards; S.B. Penick, E. Mead Johnson, Charles R. Walgreen, H.A.B. Dunning, George V. Doerr, Josiah Kirby Lilly, Charles J. Lynn and Henry S. Wellcome Citation and memorial fellowships; and Gustavus A. Pfeiffer postdoctoral memorial research fellowships.

ship for 50 yrs. in pharm. and pub. health. Award will be presented by **Columbia U.** col. of pharm. Alumni Assn. at dinner in April. . . . ●Dean Lloyd M. Parks, **Ohio State U.** school of pharm., will deliver the 1961 Kremers Memorial Lecture on April 12 at **U. of Wis.** His subj.—"What Price Professionalism." Lecture sponsored by Eta Chap. of Rho Chi. . . . ●Third annual pharm. appreciation dinner, Jan. 19, at **U. of Houston** col. of pharm. honored Dean Noel M. Ferguson and faculty members. Speakers included Gen. A. D. Bruce, U. chancellor; Cliff Caldwell, pres. of Harris Co. PhSoc.; H.H. Willke, chmn. 1957 pharm. dev. fund; Robert Balfanc, 1960 chmn., and Sam Rinando, 1961 chmn. Col. operated last yr. without deficit thanks to fund. . . . ●Treas. of N.Y. Acad. of Pharm., founder and pres. of U.S. Pharmacal and bd. pres. of **Brooklyn Col. of Pharm.** for



Edward Neimeth

21 yrs., Edward Neimeth has been elected to bd. of trustees of **L.I.U.**

research grant roundup

●Research grants further progress in pharmaceutical development. To 178 inst. in 39 states, D.C. and 6 foreign countries went 1,108 grants, 95 fellowship awards totaling $21,764,897 from **NIH** during Dec. 1960. . . . ●To **U. of Ariz.** pharm. col. a $4,000 grant from Elsa U. Pardee Foundation for cancer chemotherapy res. proj. . . . ●3-yr. grant given Paul V. Buday of pharmacology dept., **U. of R.I.** for research on enzymatic and behavioral aspects of psychic energizer and thyroid hormone interactions. . . . ●In support of undergrad res. participation prog. in summer 1961, NSF granted $8,455 to col. of pharm. **Ohio State U.** . . ●Since its beginning (Sept. 1960) medicinal chem. dept. at **U. of Buffalo** school of pharm. has rec'd more than $200,000 in res. awards.

PR story

●Telling the story of progress of pharm. to public was Edward Brady, **USC** school of pharm. prof. He spoke to the Exchange Club of Statler Center in Los Angeles, Feb. 2. . . . ●TV pharm. lectures by **PCPS** faculty members broadcast Feb. 10–May 26 have general theme—"you and your health." . . . ●Emphasizing problems facing pharm. and need for PR, Nicholas Gesoalde, exec. sec'y, and Nicholas S. Dardano, pres., N.Y. PhSoc., addressed sr. pharm. students at **St. John's U.** in Jan. . . . ●**Brooklyn Col. of Pharm. Alum. Assn.** plans annual pub. health forum for April 12 with Irving Rubin as chmn. Trade names and generic names to be discussed by physician, mfr., community pharm. Other subj.—drug sampling, cancer chemotherapy, drug distribution. . . .

industry

mergers and re-organization

●**SKF** agreed to purchase Julian Labs., steroid chm. mfg. org., internally, firm reorganized marketing div. causing shift in 14 top posts, rearranged into 3 new areas—sales, promotion, marketing services. . . . ●**Allied Labs.**, parent firm of Pitman-Moore, now part of Dow Chem.

Starting left and running clockwise—Arthur Emelin, Northam Warren, Jr., Harry M. Weaver, Vincent J. Robinson, John P. Cusano.

top echelon shifts

●Elected pres. and chief exec. officer of **Northam Warren** and v. pres. of **Chesebrough-Pond's**—Northam Warren, Jr., succeeding his father. . . . ●New v. pres. for res. and dev. at **Schering** is Harry M. Weaver, taking over from Robert E. Waterman who moves up to sr. v. pres. . . . ●**Mead Johnson** promoted J. Arthur Hill to position of v. pres. and ass't to pres.; E.A. Himes replaces him as v. pres., sales. . . . ●Pres. of **J & J's** Tek Hughes div., Vincent J. Robinson has been named to parent firm's bd. of dir. . . . ●John P. Cusano, gnl. mgr., **Purdue Frederick Int'l**, has been appointed v. pres. of firm. . . . ●At **Baxter Labs.** Arthur C. Emelin, pres. of Wallerstein div., became parent co.'s new v. pres. . . . ●Realignment at **Becton, Dickinson** makes Henry P. Becton chmn. exec. committee and John W. Simmons exec. v. pres. and chief of operations. . . . ●Named chief exec. officer by bd. of dir. at **McKesson & Robbins** was firm's pres., Herman C. Nolen.

Eugene F. Ratliff

Ralph C. Gery

Robert E. Heine

moving up

●Promotions at **Lilly** move Eugene F. Ratliff to exec. dir. of corporate dev., Ralph C. Gery to exec. dir. pharmaceutical prod., Robert E. Heine to exec. dir. prod. services. . . . ●Martin C. Sampson, MD, became new dir. med. relations for **Schering**. . . . ●Directing med. sales div. at **Pitman-Moore** is D. Fred Bledsoe, pharm. grad. of Butler U. . . . . ●**MSD's** new exec. dir. of administration for its res. lab. div. is John J. Horan, former PR dir. for **Merck & Co.** Replacing him—David F. Quinlan, former mgr. of communications. . . . ●Dr. Robert E. Dixon, just promoted to dir. of prof. services at **Roche Labs.**, is grad. of U. of Edinburgh and fellow of RSM. . . . ●Appointed dir. of hosp. sales at **A.H. Robins** is John L. Burke.

Drug Exchange marks centennial

●Citing the Philadelphia drug industry's "humanitarian" efforts to increase the life span, Mayor Richardson Dilworth proclaimed the week of January 20 as "Drug Progress Week." Celebrated that week was the centennial anniversary of the Philadelphia Drug Exchange. In recognition of his half-century of leadership in the pharmaceutical industry, PDE awarded Robert Lincoln McNeil, founder and retired president of McNeil Labs, the coveted Proctor Medal. The medal, an achievement award made only to native Pennsylvanians, was presented at a formal dinner January 25.

staff changes

●Recognition of res. contributions gained promotions to positions of res. assoc. at **Lilly** for William W. Bromer and W. Max Stark. . . . ●**Schering** added David M. Williams, MD, to med. res. div. as clinical pharmacologist. . . . ●New assoc. med. dir. of **Mead Johnson Labs.**, is Harold D. Lynch, MD, pediatrician. . . . ●**Roche Labs.** appointed Herbert J. Conrad to post of market analyst. . . . ●At **Bristol-Myers** Robert O. Slaughter's new title is that of field sales mgr. . . . ●K. Don Bowers became marketing res. mgr. for **Dorsey Labs.**

new officers for N. Calif.

Executive responsibilities changed hands at the Northern California Pharmaceutical Association's annual meeting, January 21-22, in San Francisco. Among the newly elected officers are (l to r) Ed. J. Alstrom, second vice president; Claude L. Devencenzi, first vice president and George R. Staple, president. Charles R. O'Malley (r) was re-elected secretary-treasurer. In his presidential speech Staple stressed—"modern day drugs are the biggest bargains in history." Outgoing president William G. Galbreath pointed out—"people live 10 years longer today because of wonder drugs." Dan Rennick, editor of American Druggist, and Theodore C. Klumpp, president of Winthrop Laboratories, were featured speakers. Klumpp and APhA secretary, William S. Apple, addressed the group via long distance telephone thanks to a blizzard.

in retirement

●Stepping out of active pharmaceutical picture into retirement is H.R. Frehn, exec. v. pres. **S.E. Massengill,** to continue as consultant.

pharmacists

distinguished service

●**Jerome A. Reinstein,** awarded Fulbright lectureship, will begin teaching physical pharm. at U. of San Marcos, Lima, Peru in April; also work with Bertha Pareja of U. of San Marcos in joint res. proj. between Peruvian inst. and U. of Wis. Reinstein is pharm. chem. with Pfizer and lecturer at Columbia U. col. of pharm. .

Jerome A. Reinstein

●**Marvin Gresham,** 31-yr.-old pharmacist, received Distinguished Service Award as Gainesville's outstanding young man of 1960 from Jaycee. Gresham is past president of N.E. Fla. PhA and has served on exec. com. and scholarship com. of Fla. State PhA.

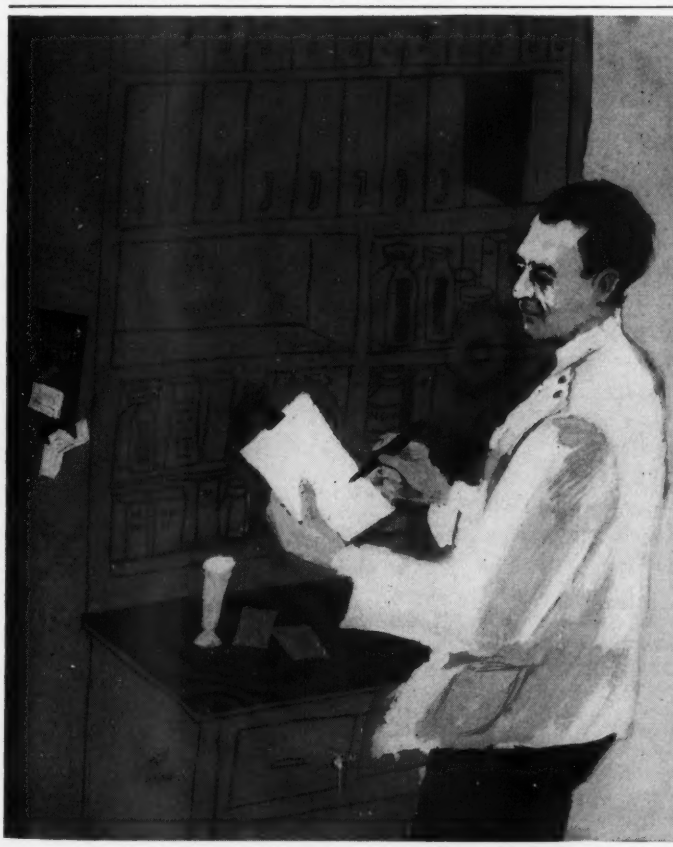
necrology

●**William J. Dunphy,** former v. pres. NARD and Conn. State Com. of Pharm., recently. He was chmn. Conn. Fair Trade board.

●**E.P. Gibney,** Feb. 1, in Clearwater, Fla. Had been associated with Sterling Drug for 43 years.

●**Orson Benjamin Newton, Jr.,** vice pres. and sales mgr. of Fleet, January 25, in Lynchburg, Va.

●**John Andrews Mease, Sr.,** recently in Mease Hospital, Dunedin, Fla. Va. druggist founded hospital in 1935 after beginning practice in Fla.



The nonadherent dressing that doesn't stick to your shelves

Vaseline® Sterile Petrolatum Gauze U.S.P. has the sales impetus that comes from steady physician recommendations. Because it's what they use in their hospitals, clinics, and offices, your physicians will recommend 'Vaseline' Sterile Petrolatum Gauze when the patient or somebody in the patient's family is to apply a dressing himself — for instance, in the home care of a colostomy or a chronic leg ulcer.

For steady, profitable repeat business, stock 'Vaseline' Sterile Petrolatum Gauze. You can expect the new size, 3″ x 3″ pads which may also be opened for use as 3″ x 9″ strips, to be especially popular. Other sizes in demand are the 1″ x 36″ and 3″ x 18″ dressings.

Order from your wholesaler.

Professional Products Division
Chesebrough-Pond's Inc., New York 17, N. Y.

A promotion that **had** to be repeated—

A Sucaryl dispenser **FREE** to your customers with each purchase of SUCARYL®

Turn the wheel, out comes a tablet...fill and us

Who says you can't improve on success? Maybe so. But we'd like to think we're doing just that with the special promotion set up for Sucaryl this spring.

You know what happened if you carried our free pocket dispenser offer last year. You picked up new Sucaryl customers. And you still have them.

Well, for Spring, 1961, we're repeating the dispenser giveaway—only this time with added dimension in advertising support and in-store display material.*

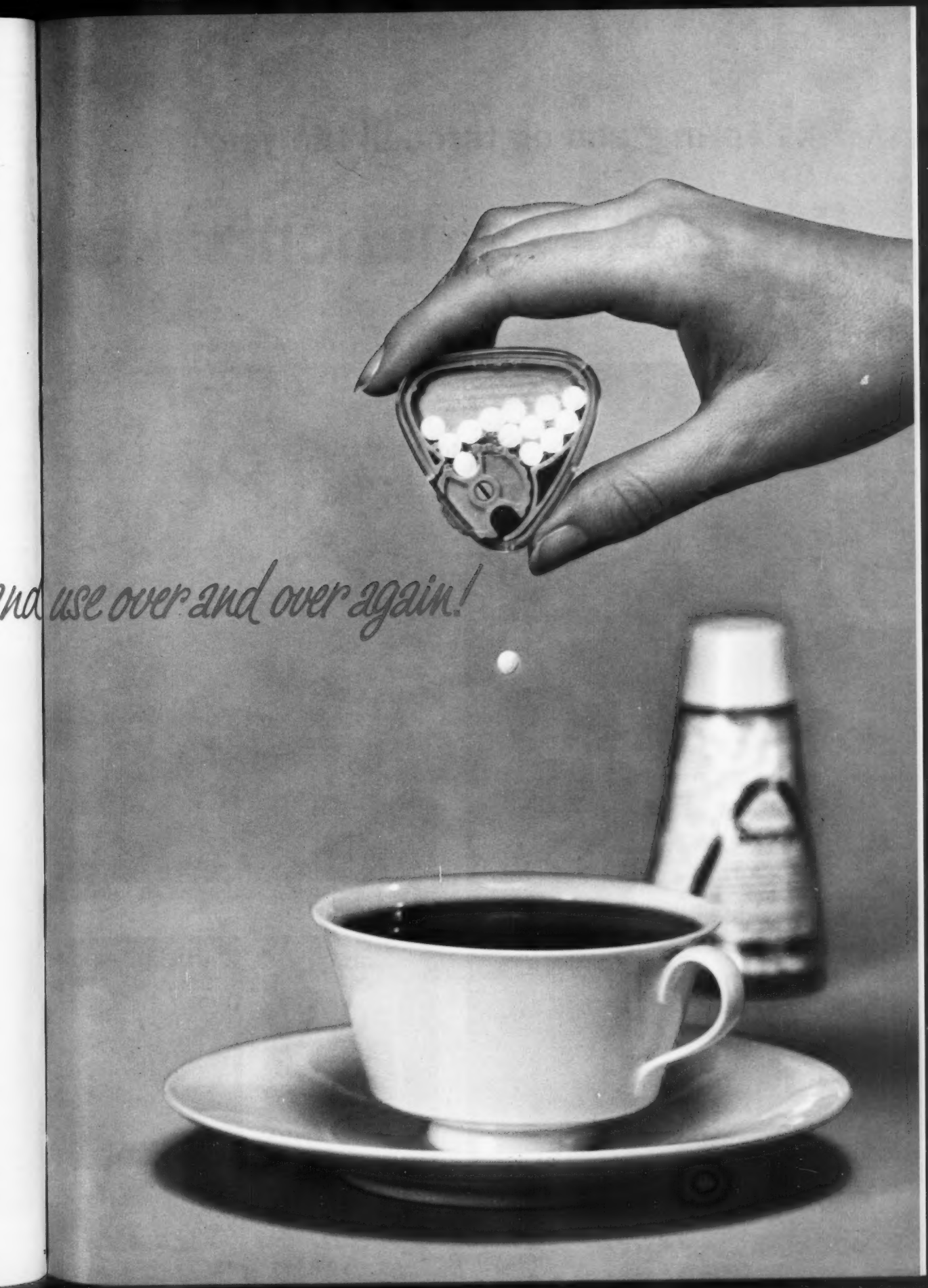
Here's how it all works

You'll find that the procedure for this spring's promotion remains essentially unchanged from that of a year ago. Abbott again furnishes you with empty Sucaryl dispensers, along with brand new display material. Your customer buys a bottle of Sucaryl Sodium tablets. He gets a dispenser free. That's it.

Why the dispenser offer?

We know that once a weight-watcher begins using Sucaryl, he's likely to stay with the product. The dispenser is a natural for attracting new users. It makes it easy to carry and use Sucaryl any place, any time. (*You* carry one for awhile—see if you aren't sold.)

*Turn to the other side of the facing page for some of the exciting elements which combine to make this the biggest Sucaryl promotion ever.


nd use over and over again!

This Spring (and on through the year)

Sucaryl promotion takes o

Self-service floor merchandiser.

The inimitable Arthur Godfrey.

Space-saving counter unit.

Some of America's most influential publications.

© 1961, ABBOTT LABORATORIES 102027

s on added dimension

A New Dimension in Sucaryl Advertising
—Arthur Godfrey on CBS Network Radio

Now you'll have the greatest salesman of them all—Arthur Godfrey—helping you build new business. Week after week, Arthur Godfrey will be telling his vast, loyal CBS network audience about Sucaryl—selling Sucaryl as only Godfrey can!

... Plus A Continuing Schedule of Ads
in Major Consumer Magazines!

In March, April, and May the dispenser giveaway will be promoted with half-page ads in these leading publications—Saturday Evening Post, Look, McCall's, Better Homes and Gardens, and the leader in circulation, Reader's Digest. These special ads will also continue Sucaryl's year-round "no thanks, no calories!" campaign theme.

A New Dimension in Point-Of-Purchase Pieces
—A Combination Display/Floor Merchandiser

This colorful new p-o-p unit not only proclaims the free dispenser offer, but—in holding all sizes and forms of Sucaryl—has a self-service function.

Your Abbott man will set it up in seconds. The unit base takes no more than 1 square foot of floor space.

... Plus A Unique New Counter Display
Promoting The Free Dispenser Offer!

Compact in size, the new Sucaryl counter display is specially designed to incorporate Sucaryl 100-tablet and 1000-tablet bottles. Also part of the unit is a dimensional "coffee cup" into which an actual dispenser appears to be dropping a Sucaryl tablet. An ideal display to have beside your cash register.

Your Abbott man will be seeing you with complete details and materials. Look for him.

Sucaryl® Abbott's non-caloric sweetener

ABBOTT

102207

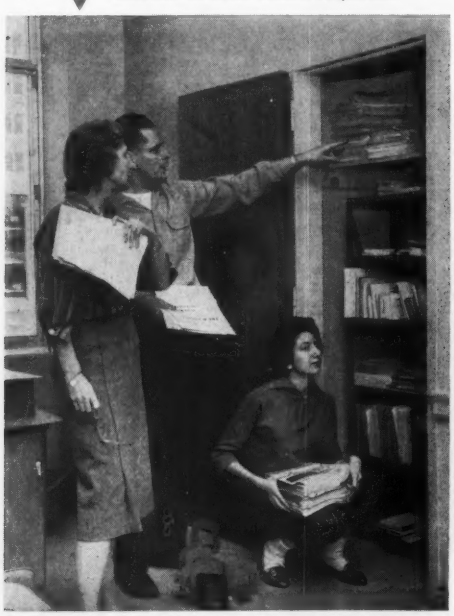
the big move

On January 20–21, coincidental with the move of the new administration into Washington, APhA headquarters staff moved into the new addition to the American Institute of Pharmacy. Neither snow nor rain nor sleet, nor gloom of night prevented the "Big Move" . . .

The office of the secretary is no exception to the hustle and bustle of moving day, as current correspondence must be processed in spite of the move. ▶

P.S. The APhA staff wants the membership to know that the photos were actually taken on moving day when they were all dressed in their workclothes. A picture story of the new office facilities and the refurbished offices in the old building on a typical "business" day will be featured in an early issue of the APhA Journal.

▼ Communications division personnel sort the wide selection of material for rapid distribution to members in answer to their varied requests.



◀ Telephone installation service men explain the new telephone system to APhA staffers. The new telephone number for the American Pharmaceutical Association is NAtional 8-4410.

◀ Moving the print shop into new quarters required considerable muscle-power. Here three movers start the trek of the equipment from the basement of the present building to the new quarters.

The addressograph department was quickly assembled in the new addition where it is conveniently located adjacent to the mailing room and the print shop. ▼

new R_x for allergy and pruritus

Forhistal®

PACKAGES and PRICES

	TRADE LIST PRICE
LONTABS, 2.5 mg. (orange)	
Bottles of 100 . . . . . each	$5.50
TABLETS, 1 mg. (pale orange, scored)	
Bottles of 100 . . . . . each	2.80
SYRUP (pink), containing 1 mg. Forhistal maleate per 5-ml. teaspoon	
Bottles of 4 fluidounces . . . . . each	1.50
PEDIATRIC DROPS (pink), containing 0.5 mg. Forhistal maleate per 0.6 ml.	
Dropper bottles of 1 fluidounce . . each	1.50
1 package of each form of issue (4 packages) . . . . . Total list price	11.30

FORHISTAL® maleate (dimethpyrindene maleate CIBA)
LONTABS® (long-acting tablets CIBA)

Special introductory offer (expires March 31, 1961) 11½% saving
1 package of each form of issue (4 packages) $10.00
Saving . . . . . $ 1.30

CIBA SUMMIT, N. J.

APhA Women's Auxiliary

student wives clubs

The work accomplished in the past by the pharmacy student wives club committee under the excellent guidance of Mrs. Charles Poe has been most gratifying but with the Chicago convention almost at hand the number and pace of the activities are increasing. To help with this important committee and the increased tempo, Mrs. E. Cataline has been made co-chairman, until the Chicago convention and then to assume full chairmanship of the committee. We can look forward to a continuation and an expansion of the activities of the group.

It is our hope that more and more of these clubs will form and become active. It is most important that all pharmacists' wives form an early interest in their husbands' profession. While the pharmacy student may not become a community pharmacy owner or the head of an allied pharmaceutical industry firm immediately upon graduation, he will become a *pharmacist*, a professional man. This fact alone calls for an early interest on his part—and the part of his wife—in the profession and the organizations that unite his profession.

public relations spearhead

The excellent report made by Mrs. Poe at the Washington convention shows how the wives of the pharmacy students, members of established Pharmacy Student Wives Clubs, through their activities, are proving to be a public relations spearhead. Their participation in community work and aid is a vital form of good public relations.

A letter from a pharmacy student in Michigan whole heartedly approves of the Auxiliary, its program for student wives, its work and its interest in pharmacy students. Not only was it a nice letter to receive but it was tangible proof that pharmacy students of today are very aware of the need for their wives to be interested in their profession.

roster of clubs

Our Auxiliary sincerely wants more and more of these Student Wives Clubs to be founded throughout the country. Any questions relative to the requirements for forming a Pharmacy Student Wives Club should be addressed to

Mrs. C. Poe
875–16th
Boulder, Colorado

or

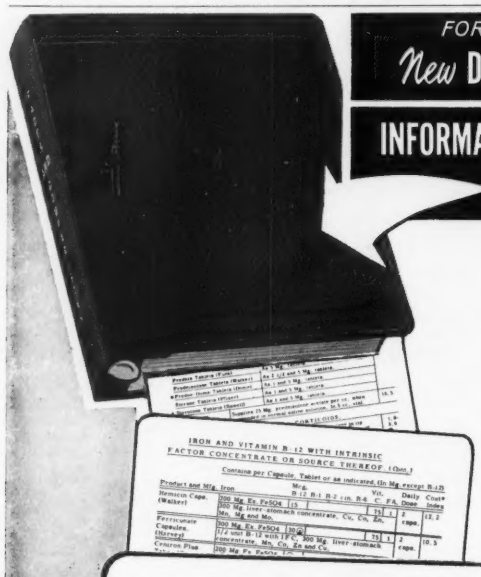
Mrs. E. Cataline
1201 Georgia N.E.,
Albuquerque, New Mexico

We are proud to print the following list of pharmacy colleges where clubs are now an accomplished fact—

Alabama Polytechnic Institute
University of Arkansas
University of Arizona
Butler University
University of California
University of Colorado
University of Georgia
Howard University
University of Iowa
University of Kentucky
Loyola College of Pharmacy
Montana State University
University of New Mexico
North Dakota State University
Ohio Northern University
College of the Pacific
Southern State College of Oklahoma
South Dakota State College
University of Washington

All the young women who are members of these clubs are also members of the Women's Auxiliary of APhA and we sincerely hope they will continue their memberships after graduation.

—Thea Gesoalde, president



FOR *New* DRUG INFORMATION

FACTS alone won't do . . . .

you need **COMPARISONS** too!

FACTS AND COMPARISONS is an information SERVICE on NEW DRUGS consisting of:

1. A 450 page loose-leaf book supplying information on nearly 6000 current products in over 400 GROUPS.
2. Monthly mailings of revised replacement pages.

ONLY **FACTS** and **COMPARISONS** OFFERS:

• Products GROUPED according to use • TABLES to permit easy COMPARISON of similarly used products • MONTHLY REVISED LOOSE-LEAF PAGES • PHARMACOLOGICAL EXCERPTS to supply additional concise data about products • A COST-INDEX to give a cost comparison on comparable products • OFFICIAL or GENERIC NAMES for the groups or for the individual products • INDEXING by Action, Group or Product • Everything in one book. No need for supplemental booklets • Book always up-to-date. No need to wait for new editions.

Highly recommended by Doctors, Pharmacists, and Hospitals

MULTI-VITAMINS WITH B-12 AND/OR

CAPSULES OR TABLETS.

Contains per Capsule or Tablet. (In Mg.

Product and Mfg.	B-1	B-2	Nia cin.	PA.	B-6	C.	Units. Unit A.	D.	
Theracebrin (Lilly)	15	10	150	20	3	150	25000	1500	2
Sevetol (Ives)	20	10	75		3	200	25000	1000	
Theraplic M.V. (Stuart)									

MAIL COUPON TODAY • GET THIS TIME-SAVING INFORMATION!

Facts and Comparisons Inc.
Box 8, Baden Sta., St. Louis 15, Mo.

☐ Enclosed is $11.00 remittance for book ($6) and 1 years revisions ($5) on 15 day money-back plan.

☐ Send literature including pages.

Name.....
Street & No.....
City.....Zone.....State.....

Winthrop

Effective February 15 to April 28, 1961

NEO-SYNEPHRINE®

HYDROCHLORIDE

Four Big Deals

UP TO 46% PROFIT!

Deal	
I	28 FREE with 116
II	12 FREE with 60
III	5 FREE with 31
IV	1 FREE with 11

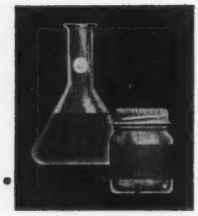
Any item listed — not assorted

Code Number				YOUR DEAL COST					
				Regular Unit Cost	Deal I	Deal II	Deal III	Deal IV	M.F.T.
N-530	**Neo-Synephrine Solution**	0.25%	1 oz.	$.60	$.48	$.50	$.52	$.55	$ .90
N-675	**Neo-Synephrine Pediatric Nasal Spray**	0.25%	20 cc.	.65	.52	.54	.56	.60	.98
N-525	**Neo-Synephrine Nasal Spray**	0.5 %	20 cc.	.83	.67	.69	.71	.76	1.25
N-534	Neo-Synephrine Solution	0.5 %	1 oz.	.72	.58	.60	.62	.66	1.08
N-540	Neo-Synephrine Solution Arom.	0.25%	1 oz.	.60	.48	.50	.52	.55	.90
N-550	Neo-Synephrine Solution	1%	1 oz.	.82	.66	.68	.70	.75	1.22
N-628	NTZ Solution		1 oz.	.72	.58	.60	.62	.66	1.08
N-627	**NTZ Nasal Spray**		20 cc.	.95	.77	.79	.82	.87	1.43

CHECK YOUR STOCK
ORDER TODAY

from your wholesaler or Winthrop representative

Winthrop LABORATORIES 1450 Broadway, New York 18, N. Y.



APhA Handy
Drug Reference

For easy reference—a listing of Journal pages for HDR by month. October, 674–683, November, 740–748; December 1960, 798–808; January 1961, p. 69–74, February, 129–134, March, 188–194.

An all-inclusive, cumulative, six-month alphabetical listing of new drugs and dosage forms, changes in available dosage forms and clinical test results of newer drugs. Notations: ▶—New product or combination. ■ NND—abstracts of descriptions of new and non-official drugs by AMA Council on Drugs. ◐ Clinical (clin.)—investigational drug not available commercially. Dosage—adult unless otherwise indicated. O-t-c—salable over-the-counter (without prescription). ℞—prescription required. *Abbreviations:* amp. (ampul), b.i.d. (twice a day), cap. (capsule), combn. (combination), equiv. (equivalent), i.m. (intramuscular or -ly), i.v. (intravenous or -ly), inj. (injection), liq. (liquid), lot. (lotion), oint. (ointment), ophth. (ophthalmic), powd. (powder), prepn. (preparation), q. (every), q.i.d. (four times a day), s.c. (subcutaneous or -ly), soln. (solution), suppos. (suppository or -ies), susp. (suspension), syr. (syrup), tab. (tablet), tbsp. (tablespoon or -ful), tsp. (teaspoon or -ful), t.i.d. (three times a day).

A

Acetaminophen, see combns. in Coplexen liq., p. 742; in Coryz susp., p. 70; in Coryz tabs., p. 676; in Hycomine comp. tabs., p. 744; in Matco analgesic tabs., p. 71; in Thorphan C.F. tabs., p. 683; in Tussabar, p. 134.

N-Acetyl-*p*-aminophenol, see acetaminophen.

Acetylsalicylic acid, see combn. in Win-Codin tabs., p. 134.

Acetifed-C Expectorant, p. 69.

Adroyd tabs., p. 69.

Akineton HCl, see biperiden HCl NND, p. 798.

Allantoin, see combns. in VAD sofcream, p. 683; in VAD and VAD w/neomycin creams, p. 683.

Alpha-phenoxyethyl penicillin potassium, see potassium phenethicillin.

Aluminum aspirin, see combn. in Colrex comp. caps., p. 189; in Dalca tabs., p. 70.

Aluminum hydroxide gel, see combn. in Balvis tabs., p. 69.

Altafur, see furaltadone NND, p. 803.

Alvodine ethanesulfonate amps. and tabs., p. 740.

Aminophylline, see Rectalad-aminophylline, p. 807.

Amitriptyline, clin., p. 674.

Amobarbital, see combn. in Asmafield elix., p. 129; in Metranil-AM Duracap caps., p. 72.

Amodiaquin HCl, see combn. in Camoprim tabs. and Infatabs, p. 676.

Ammonium chloride, see combn. in Cheritussar expectorant concentrate, p. 130; in Tocillana expectorant concentrate, p. 133; in Tussabar, p. 134.

***d*-Amphetamine, carboxymethylcellulose salt,** see combn. in Obes TT tabs., p. 72.

Amphotericin B, see combn. in Mysteclin-F caps., p. 679.

▶**Antibiotic Troches** (Matco). Per troche: neomycin sulfate 3.5 mg., tyrothrycin 2 mg., diperodon HCl 1 mg. For the relief of throat and mouth irritations. O-t-c.

Anturan, see sulfinpyrazone NND, p. 746.

APC mixture, see combn. in Fiorinal caps., p. 743.

Ascorbic acid, see combns. in Asteric comp. tabs., p. 69; in Colrex Compound caps., p. 189; in Dactil-OB tabs., p. 676; in Obes TT tabs., p. 72; in C-Ron Prenatal tabs., p. 189; in Thorphan C.F. tabs., p. 683; in Win-Codin tabs., p. 134.

Asmafield elixir, p. 129.

Aspirin, see combns. in Asteric comp. tabs., p. 69; in Planolar tabs., p. 806; in Robaxisal P-H tabs., p. 682; in Trinsicon M caps., p. 74.

Asteric compound tabs., p. 69.

Atropine sulfate, see combn. in Lomotil tabs., p. 69.

Atabee-TD caps., p. 798.

Atarax HCl, see Hydroxyzine HCl, NND, p. 191.

Attapulgite, activated, see combn. in Sebasorb skin lot., p. 193.

Azo-Mandelamine tabs., p. 69.

B

Balvis tabs., p. 69.

Benzalkonium chloride, see combn. in Detergel aromatic spray, p. 130; in Detergel emulsion, p. 130; in Mytrate ophth. soln., p. 72.

Benzalkonium chloride tincture, see Zephiran tincture, p. 74.

Benzocaine, see combn. in Rectalyt jelly, p. 807.

Benzphetamine HCl, see Didrex tabs., p. 70.

Benzthiazide, see NaClex tabs., p. 804.

Betadine surgical scrub, p. 798.

Biperiden HCl NND, p. 798.

Brevital sodium for injection, see methohexital sodium NND, p. 804.

Brompheniramine maleate, see combn. in Dimetapp Extentabs, p. 70.

C

Caffeine, see combn. in Hycomine comp. tabs., p. 774; in Matco analgesic tabs., p. 71; in Rectalad-migraine, p. 807; in Soma comp. and Soma comp. w/codeine, p. 807.

Calcium acetylsalicylate carbamide, see combn. in Tain inlay-tabs., p. 747.

Calcium pantothenate, see combns., in Asteric comp. tabs., p. 69; in Obes TT tabs., p. 72.

Calcium undecylenate, see Caldesene oint. and powd., p. 741.

Caldesene ointment and powder, p. 741.

Cal-Ron OB tabs., p. 798.

Camoprim tabs., p. 676.

Camphor, see combn. in Detergel emulsion, p. 130.

Cantharidin, see Cantharone liq., p. 798.

Cantharone liquid, p. 798.

Carbetapentane tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Carbo-Dome creme and lot., p. 676.

Cardioquin tabs., p. 130.

▶**Cenalene** Liquid (Central Pharmacal). Per 5 cc.: pentylenetetrazol 100 mg., thiamine HCl 1.67 mg., niacinamide 7.5 mg., cyanocobalamin (Vit. B_{12}) 2.5 mcg. For abnormal behavior symptoms in the senile patient, related in general to cerebral anoxia arising from cerebral arteriosclerosis. The changes such as mental confusion, memory defects, apathy and depression may be mild and the patients may be treated continuously at home. *Dosage:* 2 tsps. t.i.d. after meals. Pts. and gals. ℞.

Centalone Cap. and Inj., p. 130.

Carisoprodol, see combn. in Soma comp. and Soma comp. w/codeine, p. 807; in Somacort tabs., p. 682.

Cary skin thermometer, p. 741.

Cellase 1000 powd., p. 741.

Cetalkonium chloride, see combn. in Ototrin ear drops, p. 132.

Cheritussar expectorant concentrate, p. 130.

Chlophedianol HCl, see ULO syr., p. 741.

Chloral hydrate, see combn. in Rectalad-migraine, p. 807.

Chloroform, see combn. in Coryz susp., p. 70.

Chlorpheniramine maleate, see combns. in Colrex comp. caps., p. 189; in Covanamine expectorant, p. 742; in Dalca tabs., p. 70; in Hista-Vadrin tabs., p. 131; in Hycomine comp. tabs., p. 744; in Thorphan C.F. tabs., p. 683; in Win-Codin tabs., p. 134.

Chlorpheniramine tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Chlorphenoxamine HCl NND, p. 802.

Choloxin, p. 741.

Citric acid, see combn. in Codimal PH w/codeine syr., p. 130; in Thormal syr., p. 133.

Clysmathane rectal solution, p. 742.

Cobalamin concentrate, see combn. in Trinsicon M caps., p. 74.

Cocillana extract, see combn. in Tocillana expectorant, p. 133.
Codeine phosphate, see combn. in Actifed-C expectorant, p. 69; in Codimal PH w/codeine syr., p. 130; in Colrex comp. caps., p. 189; in Mercodol and Decapryn syr., p. 72; Soma comp. w/codeine, p. 807; in Win-Codin tabs., p. 134.
Codimal PH with codeine syr., p. 130.
▸**Colrex Compound** Capsules (Rowell). Per cap. (yellow): codeine phosphate 16 mg., papaverine HCl 16 mg., aluminum aspirin 300 mg., phenylephrine HCl 5 mg., chlorpheniramine maleate 2 mg., ascorbic acid 100 mg. For the symptomatic relief of the common cold and other acute respiratory conditions. *Dosage:* 1 cap. t.i.d. or q.i.d. Bottles of 100 and 1000. ℞.
Coplexen liq., p. 742.
Coricidin D liq., p. 742.
Cortisporin Ophthalmic susp., p. 70.
Coryz susp., p. 70; tabs., p. 676.
▸**Cosa-Terrastatin** Capsules and for Suspension (Pfizer). Per cap. (pink and yellow): oxytetracycline 250 mg., glucos-

amine 250 mg., nystatin 250,000 u. Susp. (prepared by adding water): per 5 cc.: oxytetracycline 125 mg., glucosamine 125 mg., nystatin 125,000 u. For indications in which oxytetracycline is therapeutically or prophylactically effective. Combination with nystatin is designed to protect against monilial superinfections. *Dosage:* 1–2 Gm. daily in divided doses; children 10–20 mg./lb. body weight daily in divided doses. Caps. in bottles of 50; powder for susp. in 2 oz. bottles. ℞.
Cosmedicake, p. 676.
Covanamine expectorant, p. 742.
Creamlets, p. 70.
▸**C-Ron Prenatal** Tablets (Rowell). Per tab. (red, sugar-coated): ferrous fumarate 150 mg. (equiv. to 50 mg. Fe), ascorbic acid 100 mg., purified powdered bone 750 mg., (containing calcium 250 mg., and phosphorus 116 mg.) vit. A 3000 u., vit. D 300 u. For pregnant or lactating patients whose dietary habits are essentially sufficient, except for iron and calcium intake and for the prophylaxis and treatment of iron deficiency anemia of pregnancy. *Dosage:* 1–2 tabs. daily. Bottles of 100 and 1000. O-t-c.
Cupertin cream, p. 676.
Cyanocobalamin (Vitamin B_{12}), see combn. in Cenalene liq., p. 188.

D

Dactil-OB tabs., p. 676.
Dalca tabs., p. 70.
Daricon, see oxyphencyclimine HCl NND, p. 680.
Darvon compound-65 Pulvules, p. 743.
Dayteens Filmtab, p. 743.
DBI tabs., see phenformin HCl NND, p. 680.
Deaner-100 tabs., p. 743.
Deaner, see deanol acetamidobenzoate NND, p. 742.
Deanol acetamidobenzoate NND, p. 742.
Declostatin caps., p. 676.
Deluteval 2X inj., p. 676.
●**Demecarium Bromide** NND; Humorsol (Merck S & D); decamethylenebis-(*m* - dimethylaminophenyl - N - methylcarbamate) - dimethobromide. (2 Molecules of neostigmine with a decamethylene chain interposed.) A potent cholinesterase inhibitor useful in the management of glaucoma and accomodative esotropia. Its potency and toxicity are similar to other long-acting cholinesterase inhibitors such as isoflurophate and echothiophate. Its use is contraindicated in narrow-angle glaucoma and in glaucoma secondary to iritis. There is little justification for its use in patients in whom less toxic agents yield satisfactory results. Care should be taken to detect a serious transient rise in intraocular pressure which occurs in an occasional patient, to detect systemic absorption of the drug, and to detect the possible development of iris cysts. *Dosage:* Optimal dosage in glaucoma varies from 1 to 2 drops of a 0.25% soln. twice weekly to 1 to 2 drops in the affected eye b.i.d., regulated with the aid of tonometric measurements to meet the needs of each patient. In the management of esotropia uncomplicated by amblyopia or anisometropia, 1 drop in each eye every day for 2 or 3 wks. If a severe degree of miosis interfering with vision occurs, the frequency of dosage should be reduced to every other day. Introduced 1959. See *J. Am. Med. Assn.*, **174,** 2060 (Dec. 17, 1960).
Demethylchlortetracycline HCl, see combn. in Declostatin caps., p. 676.
Depo-Provera susp., p. 802.
Desbutal tabs., 676.
Desoxyribonuclease, see combn. in Elase for soln. and oint., p. 677.
Detergel aromatic spray, p. 130.
Detergel emulsion, p. 130.
Dextromethorphan HBr, see Pyraldine, p. 746; see combns. in Thormal syr., p. 133; in Thorphan C.F. tabs., p. 683.
Dianeal w/dextrose soln., p. 677.
Diastase, see combn. in Phazyme tabs., p. 806.
Dichlorphenamide, see Oratrol tabs., p. 72.
Didrex tabs., p. 70.
Diethylpropion, see combn. in Natorexic tabs., p. 804; see Tenuate Dospan tabs., p. 74.
Dihydrocodeinone bitartrate, see combn. in Hycomine comp. tabs., p. 744; in Tussaminic expectorant, p. 808.
Dihydroxyaluminum aminoacetate, see combn. in Pred-Kam tabs., p. 742.
Dimetane, see brompheniramine maleate, p. 69.
Dimetapp Extentabs, p. 70.
2,6-Dimethoxyphenylpenicillin, see Staphcillin, p. 746.
Dimethpyridene maleate, see Forhistal maleate, p. 190.

Stock Ahead In the months since its introduction, Chymoral has become an outstanding success with medical men—general practitioner and specialist alike—for its ability to bring about earlier resolution of inflamed or traumatized conditions at any bodily site. You will see a steadily increasing number of prescriptions for Chymoral in the coming months.

check your stock—avoid back order

CHYMORAL®

oral systemic anti-inflammatory enzyme tablet

© Jan. 1961, A. P. Co.

ARMOUR PHARMACEUTICAL COMPANY
KANKAKEE, ILLINOIS *Armour Means Protection*

CHYMORAL

Chymoral is an ORAL anti-inflammatory enzyme tablet specifically formulated for intestinal absorption. Each tablet provides enzymatic activity, equivalent to 50,000 Armour Units, supplied by a purified concentrate which has specific trypsin and chymotrypsin activity in a ratio of approximately six to one. ACTION: Reduces inflammation of all types; reduces and prevents edema except that of cardiac or renal origin; hastens absorption of blood and lymph extravasates; helps to liquefy thick tenacious mucous secretions; improves regional circulation; promotes healing; reduces pain. INDICATIONS: Chymoral is indicated in respiratory conditions such as asthma, bronchitis, rhinitis, sinusitis; in accidental trauma to speed absorption of hematoma, bruises, and contusions; in inflammatory dermatoses to ameliorate acute inflammation in conjunction with standard therapies; in gynecologic conditions such as pelvic inflammatory disease and mastitis; in obstetrics as episiotomies and breast engorgement; in surgical procedures as biopsies, hernia repairs, hemorrhoidectomies, mammectomies, phlebitis and thrombophlebitis; in genitourinary disorders as epididymitis, orchitis and prostatitis; in dental and oral surgery as fractures of the mandible or maxilla, difficult or multiple extractions, and alveolectomies. CONTRAINDICATIONS: None known. INCOMPATIBILITIES: None known. Antibiotics as well as generally accepted measures may be coadministered. SIDE EFFECTS: Mild gastric upsets, rarely encountered. DOSAGE: Recommended initial dose is two tablets q.i.d.; one tablet q.i.d. for maintenance. SUPPLIED: Bottles of 48 tablets.

Dimethyl polysiloxane, see combn. in Phazyme tabs., p. 806.

3,5-Dimethyl-4-chlorophenol, see chloroxylenol, p. 70.

Dioctyl sodium sulfosuccinate, see combn. in Ferro-Sequels caps., p. 190.

Diperodon HCl, see combn. in antibiotic troches, p. 188; in Ototrin ear drops, p. 132.

Diphenoxylate HCl, see Lomotil tabs., p. 71.

Diphenylpyraline, see Cupertin cream, p. 676.

Diphtheria toxoid, see combn. in Trinfagen vaccine, p. 133.

▶**Domoform-HC** Creme and Lotion (Dome). Per Gm. (both forms): micronized hydrocortisone alcohol 5 mg. and iodochlorhydroxyquin 3% in Acid Mantle vehicle, pH 5.6. For eczematous and eczematoid skin eruptions. May stain hair or clothing and should not be used if patient is sensitive to iodine. *Dosage:* Apply to affected area t.i.d. or q.i.d. Creme in 1/2 and 1 oz. tubes; lotion in 1/2 oz. bottles. ℞.

▶**Domoform-HC Forte** Creme and Lotion (Dome). Per Gm. (both forms): micronized hydrocortisone alcohol 10 mg. and iodochlorhydroxyquin 3% in Acid Mantle vehicle of pH 5.6. For exematous and eczematoid skin eruptions. May stain hair or clothing and should not be used if patient is sensitive to iodine. *Dosage:* Apply t.i.d. or q.i.d. Creme in 1/2 and 1 oz. tubes; lotion in 1/2 oz. bottles. ℞.

Domoform creme and oint., p. 130.

Doxylamine succinate, see combn. in Mercodol with Decapryn syr., p. 72.

E

●**Echothiophate Iodide** NND; Phospholine Iodide (Campbell); 0,0-diethyl S - (2 - dimethylaminoethyl) - phosphorothiolate methyliodide. A long-acting cholinesterase-inhibitor, useful in the management of glaucoma; similar to isoflurophate in efficacy and side effects, but possessing the advantage of greater stability in aqueous solutions. It is administered only by local instillation into the conjunctival sac, principally for the control of the intraocular tension in glaucoma. Ciliary spasm is the most common and most annoying side effect. Cysts of the iris sometimes develop with prolonged use, which disappear when the drug is withdrawn. Manifestations suggesting cholinergic stimulation, including diarrhea, intestinal cramps, nausea, vomiting and salivation, have been reported occasionally. In acute accidental poisoning, atropine should be given; large doses may be necessary. *Dosage:* The frequency of administration and the strength of solution are adjusted in accordance with the requirement of each patient. In most cases, instillation of a single drop of a 0.06 to 0.125% solution into the affected eye daily or on alternate days will be adequate. Bedtime is the preferred time for administration. Solutions of appropriate strength are freshly prepared from powder and are dispensed by the pharmacist; the diluent supplied by the manufacturer is used as a vehicle and provides an approximately isotonic solution containing 0.5% chlorobutanol as preservative. Echothiophate iodide is relatively stable in aqueous solutions; refrigerated solutions show no appreciable loss of activity for a year or more; at room temperature, potency diminishes by not more than 10% in one month. In no instance should the powder be applied to the eye. Introduced 1959. See J. Am. Med. Assn., **174,** 2060 (Dec. 17, 1960).

Elase soln. and oint., p. 677.

Elavil, see amitriptyline, p. 674.

Electrolyte soln. for irrigation, see Tis-u-sol soln., p. 683.

Electrolytes, see Dianeal w/dextrose solns., p. 677.

Emylcamate, see Striatran tabs., p. 682.

Enduron tabs., p. 802.

Enzyme combn., see Trulase tabs., p. 808.

Ephedrine HCl, see combn. in Asmafield elix., p. 129.

Ephedrine sulfate, see combn. in Isuprel comp. elix., p. 191.

Ephedrine tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Ephoxamine syr., p. 803.

Epinephrine bitartrate, see Mytrate ophth. soln., p. 72.

Ergotamine tartrate, see combn. in Rectalad-migraine, p. 807.

Es-A-Cort lot., p. 677.

Estradiol valerate, see combn. in Deluteval 2X inj., p. 676.

Estrone, see combn. in Es-A-Cort lot., p. 677.

Ethoheptazine citrate NND, p. 743.

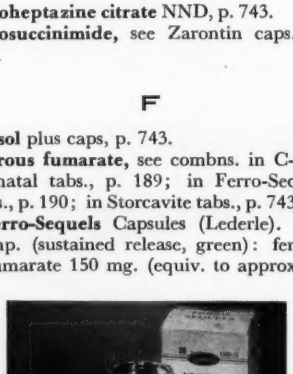
Ethosuccinimide, see Zarontin caps., p. 134.

F

Feosol plus caps, p. 743.

Ferrous fumarate, see combns. in C-Ron Prenatal tabs., p. 189; in Ferro-Sequels caps., p. 190; in Storcavite tabs., p. 743.

▶**Ferro-Sequels** Capsules (Lederle). Per cap. (sustained release, green): ferrous fumarate 150 mg. (equiv. to approx. 50



mg. of elemental iron), dioctyl sodium sulfosuccinate 100 mg. For the prevention and treatment of iron deficiency anemia. The fecal softener, dioctyl sodium sulfosuccinate, minimizes constipation associated with iron therapy. *Dosage:* 1–2 caps. daily. Bottles of 30. O-t-c.

Ferrous sulfate, anhydrous, see combn. in Trinsicon M caps., p. 74.

Fibrinolysin (human), see combn. in Elase for soln. and oint., p. 677.

Fiorinal caps., p. 743.

Fluphenazine di-HCl, see Prolixin inj., p. 681.

▶**Forhistal Maleate Lontabs,** Tablets. Syrup and Pediatric Drops (Ciba), per Lontab (sustained release, orange tabs.): dimethpyridene maleate (2-{1 - [2 - (2 - dimethylaminoethyl) - 3-indenyl]-ethyl-}pyridine maleate) 2.5 mg. Per tab. (pale orange, scored): dimethpyridene maleate 1 mg. Syrup (pink), per 5 cc.: dimethpyridene 1 mg. Pediatric drops (pink), per 0.6 cc.: dimethpyridene 0.5 mg. Antihistaminic for the symptomatic control of respiratory and ocular allergies and allergic and pruritic dermatoses. *Dosage:* 1 Lontab once or twice daily; 1–2 tabs. 1 to 3 times daily; 1–2 tsps. of syrup 1 to 3 times daily; children over 6 yrs., same as for adults; under 6 yrs.; pediatric drops, 0.3–0.6 cc. b.i.d. or t.i.d. Lontabs and tabs. in bottles of 100; syrup in bottles of 4 fl. ozs.; pediatric drops in dropper bottles of 1 fl. oz. ℞.

▶**Furadantin** Sodium for Injection (Eaton). Per 20 cc. vial: nitrofurantoin sodium (sterile) 180 mg. For the treatment of pyelonephritis, cystitis and prostatitis when peroral administration is not feasible; susceptible systemic bacterial infections, with the exception of bacteremias (septicemias) unless other therapy has failed. In the presence of impaired renal function, the drug should be employed cautiously. It is advisable to observe carefully Negroes and those with potential intrinsic abnormality of red blood cells sensitive to primaquine, and discontinue treatment if hemolysis appears. Nausea or emesis, if it occurs, may be minimized by decreasing dosage. There may be occasional headache or malaise. *Administration:* In patients weighing over 120 pounds: 180 mg. (initially dissolved in 15 cc. of 5% dextrose or in sterile water for inj.) in 500 cc. of an intravenous fluid, administered twice daily by i.v. drip at the usual rate. The final solution yields 1 mg. of Furadantin for each 2.8 cc. of solution. In patients under 120 lbs., 3 mg./lb. of body weight per day in 2 equal doses. Specific directions for preparation and calculation of dosage are contained in the package insert. ℞.

Furaltadone NND, p. 803.

G

Gelatin, see combn. in Orahesive powd., p. 192.

Glucagon HCl amp., p. 131.

Glucosamine, see combn. in Cosa-Terrastatin caps. and for susp., p. 189.

Glyceryl guaiacolate, see combns. in Actifed-C expectorant, p. 69; in Coryz tabs., p. 676; in Coryz susp., p. 70; in Covanamine expectorant, p. 742; in Tussaminic expectorant, p. 808.

Guar cellupectinoid, see comb. in Balvis tabs., p. 69.

H

Hesperidin complex, see combn. in Dactil-OB tabs., p. 676.

Hexachlorophene, see combn. in Sebasorb skin lot., p. 193.

Hista-Vadrin tabs., p. 131.

Homatropine methylbromide, see combns. in Hycomine comp. tabs., p. 744; in Septamide tabs., p. 133.

Humatin sensitivity discs, p. 677.

Humorsol (Merck S & D), see demecarium bromide NND, p. 189.

Hycomine comp. tabs., p. 744.

Hydrochlorothiazide, see combn. in Hydropres Ka-50 tabs., p. 191; in Miluretic tabs., p. 191.

Hydrocortisone, see combns. in Cortisporin opth. susp., p. 70; in Ototrin ear drops, p. 132; in Octurin eye drops, p. 132.

Hydrocortisone alcohol, see combn. in Domoform-HC and Domoform Forte creme and lot., p. 190; in Es-A-Cort lot., p. 677; in Rectalyt jelly, p. 807; see Texacort cream 100; p. 133.

▸**Hydropres Ka-50** Tablets (Merck S & D). Per tab. (sugar coated, yellow): hydrochlorothiazide 50 mg., reserpine 0.125 mg., potassium chloride 572 mg. Diuretic and antihypertensive. *Dosage:* 1 tab. once or twice a day. Bottles of 100 and 1000. ℞.

Hydroxychloroquine sulfate, see combn. in Planolar tabs., p. 808.

Hydroxyprogesterone caproate, see combn. in Deluteval 2X inj., p. 676.

●**Hydroxyzine Hydrochloride** NND; Atarax Hydrochloride, and Hydroxyzine Pamoate NND, Vistaril Parenteral (Pfizer); 1 - (*p* - chlorobenzhydryl) - 4 - [2 - (2 - hydroxyethoxy)ethyl] piperazine dihydrochloride. Hydroxyzine HCl has central nervous system depressant and antispasmodic actions in addition to its antihistaminic effect. Sedation is the most prominent action of the drug and forms the basis for its most common clinical use. Thus it has been employed as a psychotherapeutic or calming agent for the symptomatic treatment of a wide variety of emotional or mental disorders characterized by anxiety, tension and agitation. Its use in patients with frank psychoses has not been promising. It is likewise of little benefit in depressive states unless there is a strong overlay of agitation and anxiety. On the basis of currently available evidence, it would appear to be useful for the symptomatic management of neuroses rather than psychoses. Hydroxyzine HCl has been used, with apparent benefit, in the management of acute and chronic urticaria; it is only moderately effective in allergic rhinitis and other allergic disorders. The possible usefulness of the antisecretory and antispasmodic properties of the drug for the management of peptic ulcer and other diseases of the gastrointestinal tract has not been adequately studied. The toxicity of hydroxyzine HCl is low. Drowsiness may occur shortly after the drug is taken but is transient. The dosage requirement for anticoagulants is reduced when hydroxyzine HCl is given concurrently. *Dosage:* Orally, 25–100 mg. t.i.d. or q.i.d.; children under 6 yrs., 50 mg. daily in divided doses; children over 6 yrs., 50–100 mg. daily. Parenterally, i.m., 50–100 mg. initially followed by 25–50 mg. q. 4–6 hrs.; i.v. not more than 100 mg. at a rate of not more than 25 mg./min. Available as injection of 50, 100 mg. per 2 cc.; 250 mg. per 10 cc.; syrup, 2 mg. per cc. and tablets of 10, 25 and 100 mg. Introduced 1956. See *J. Am. Med. Assn.*, **17,** 2061(Dec. 17, 1960).

Hydroxyzine pamoate, see hydroxyzine HCl NND, p. 191.

Hyoscyamine sulfate, see combn. in Robaxisal-PH tabs., p. 682.

Hypaque M 75% soln., p. 803.

I

Ilosone Pulvules and Ilosone sulfa tabs., p. 744.

Inpersol soln., p. 678.

Iodine-polyvinylpyrrolidone, see combn. in Betadine surgical scrub, p. 798.

Iodochlorhydroxyquin, see Domoform Creme and oint., p. 130; combn. in Domoform-HC and Domoform Forte creme and lot., p. 190.

Iron carbobydrate complex, see Jefron elix., p. 744.

Isobutylallylbarbituric acid, see combn. in Fiorinal caps., p. 743.

Isoproterenol HCl, see combn. in Isuprel comp. elix., p. 191.

●**Isoxsuprine Hydrochloride NND;** Vasodilan (Mead Johnson); chemically 1 - (*p* - hydroxyphenyl) - 2 - [(1′ - methyl-2′ - phenoxy)ethylaminol] - 1 - propanol hydrochloride. A sympathomimetic agent whose efficacy as a vasodilator in peripheral vascular disease is comparable to that of similar drugs now in use. Although also used to promote uterine relaxation in disorders of uterine motility, convincing evidence of its effectiveness in these conditions is lacking. Untoward effects are infrequent and relatively mild. Usual doses produce little effect on heart rate or blood pressure. Larger doses, however, induce cardiac acceleration and a fall in blood pressure and have occasioned abrupt hypotensive reactions in hypertensive patients. Other symptoms, occurring occasionally, include palpitation, nausea, vomiting, dizziness, and weakness. Isoxsuprine HCl may be administered orally or intramuscularly. *Dosage:* 10–20 mg. orally t.i.d. or q.i.d. or 5–10 mg. i.m. 2 or 3 times daily. Introduced 1959. See *J. Am. Med. Assn.*, **174,** 2061(Dec. 17, 1960).

▸**Isuprel Compound Elixir** (Winthrop).

Per 15 cc. (vanilla): phenobarbital 6 mg., isoproterenol HCl 2.5 mg., ephedrine sulfate 12 mg., theophylline 45 mg., potassium iodide 150 mg. For asthma, allergic coughs and chronic bronchitis frequently associated with these respiratory disorders. Symptoms of adrenergic noverstimulatio such as tachycardia or nervousness may occur, in which case the preparation should be temporarily discontinued and administered later at a lower dosage. Should not be given to patients with known intolerance to iodides. *Dosage:* 1–2 tbs. t.i.d. or q.i.d; children, 1–3 tsps. t.i.d. Pts. and gals. ℞.

J

Jefron elix., p. 744.

K

Kanamycin sulfate NND, p. 678.

Kantrex, see kanamycin sulfate NND, p. 678.

L

Lida-Mantle creme, p. 744.

▸**Lidamycin** Creme (Dome). Per Gm.: neomycin sulfate 5 mg. combined with Lida-Mantle creme. For combating threatened or present infection in addition to topical anesthesia in pruritus, pain soreness, etc. *Application:* Liberally as needed. Tubes of ½ and 1 oz. ℞.

Lidocaine HCl, see Lida-Mantle creme, p. 744.

Lipotropics, see combn. w/vitamins A, C, and B-complex in Suplex-C tabs., p. 133.

Liver-stomach concentrate, see combn. in Trinsicon M caps., p. 74.

Lomotil tabs., p. 71.

Lotusate, see talbutal NND, p. 808.

Lucanthone HCl tabs., p. 678.

M

▸**Madribon** Tablets (Roche). Per tab. (chewable, orange): sulfadimethoxine 250 mg. A sulfonamide for use against a wide range of gram-positive and gram-negative organisms. Bottles of 30 and 100. ℞.

Magnesium aluminate, hydrated, see Riopan tabs. and susp., p. 682.

Magnesium oxide, see combn. in Balvis tabs., p. 69.

Magnesium trisilicate, see combn. in Balvis tabs., p. 69.

Matco analgesic tabs., p. 71.

Maturon tabs., p. 804.

Measles vaccine, p. 744.

Medrol w/Orthoxine tabs., p. 678.

Medroxyprogesterone acetate, see Depo-Provera susp., p. 802.

Menthol, see combn. in Rectalyt jelly, p. 807; in Tocillana expectorant concentrate, p. 133.

Meprobamate, see combn. in Miluretic tabs., p. 191.

Mercodol with Decapryn syr., p. 72.

Metahydrin tabs., p. 72.

Methamphetamine HCl, see combns. in Desbutal Gradumet tabs., p. 676.

Methapyrilene HCl, see combns. in Hista-Vadrin tabs., p. 131.

Methenamine mandelate, see combn. in Azo-Mandelamine tabs., p. 69; in Septamide tabs., p. 133.

Methocarbamol, see combn. in Robaxisal-PH tabs., p. 682.

Methohexital sodium NND, p. 804.

Methscopolamine nitrate, see combn. in MSC Triaminic tabs., p. 192.

Methylethylamino-phenylpropanol HCl, see Nethamine HCl, p. 72.

Methoxyphenamine HCl, see combn. in Medrol w/Orthoxine tabs., p. 678.

Methoxypromazine maleate NND, p. 744.

Methyclothiazide, see Enduron tabs., p. 802.

Methylcellulose, see combns. in Mytrate ophth. soln., p. 72.

Methylglucamine diatrizoate, see combn. in Hypaque-M 75% soln., p. 803.

Methylprednisolone HCl, see combn. in Medrol w/Orthoxine tabs., p. 678.

Metranil-AM Duracap caps., p. 72.

Metranil tabs., p. 72.

Metrecal liq., p. 745.

▸**Miluretic** Tablets (Wallace). Per tab. (scored): hydrochlorothiazide 25 mg. and meprobamate 200 mg. For

hypertension, congestive heart failure and premenstrual tension, especially when anxiety and tension are complicating factors. *Dosage:* for hypertension, 1 tab. q.i.d.; for congestive failure, 2 tabs. q.i.d.; for premenstrual tension, 1 tab. once or twice daily. Bottles of 50. ℞.

Monalium hydrate, see Riopan tabs. and susp., p. 682.

▶**MSC Triaminic** Tablets (Dorsey). Per tab. (timed release): phenylpropanolamine HCl 50 mg., pheniramine maleate 25 mg., pyrilamine maleate 25 mg., methscopolamine nitrate 4 mg. To decongest and promote drainage of nasal and paranasal passages, and to prevent or arrest histamine-induced damage. Bottles of 50. ℞.

Mylase-100, see combn. in Primase tabs., p. 806.

Mysteclin-F caps., p. 679.

Mytrate ophthalmic soln., p. 72.

N

Natorexic tabs., p. 804.

Naturetin w/K tabs., p. 804.

Nekatussin, p. 132.

Neomycin, see combns. in Detergel emulsion, p. 130.

Neomycin sulfate, see Neopan cream, p. 679; combns. in antibiotic troches, p. 132; in Cortisporin ophth. susp., p. 79; in Lidamycin creme, p. 191; in Ocutrin eye drops, p. 132; in Ototrin ear drops, p. 132; in VAD w/neomycin cream, p. 683; in Vio-Biotic troches, p. 808.

Neopan cream, p. 679.

Nethamine HCl, see combn. in Mercodol and Decapryn syr., p. 72.

Niacinamide, see combn. in Cenalene liq., p. 188; in Obes TT tabs., p. 72.

Nitrofurantoin sodium, see Furadantin sodium for inj., p. 190.

Noscapine, see combn. in Coryz susp., p. 70; in Coryz tabs., p. 676; in Nekatussin, p. 132.

Nystatin, see combn. in Cosa-Terrastatin caps. and for susp., p. 189; in Declostatin caps., p. 676.

O

Obes TT tabs., p. 72.

Ocutrin eye drops, p. 132.

▶**Orahesive** Powder (Squibb). Contains a mixture of pectin, gelatin, and sodium carboxymethylcellulose. For use as a denture adhesive. In clinical trials, dental patients reported adhesive effect of Orahesive lasted almost twice as long as other preparations, so that one application in the morning before breakfast usually lasted until evening if the patient's dentures were satisfactorily fitted. Orahesive is tasteless, white, esthetically acceptable and is supplied in a pocket-sized bottle with convenient shaker top. *Application:* Apply liberally to wet dentures as needed. Shaker top bottles of 25 Gm. O-t-c.

Oratol tabs., p. 72.

Ostensin, see trimethidinium methosulfate NND, p. 747.

Ototrin ear drops, p. 132.

Oxymetholone, see Adroyd tabs., p. 69.

Oxyphencyclimine HCl, p. 680.

Oxytetracycline, see combn. in Cosa-Terrastatin caps. and for susp., p. 189.

Oxytocin (synthetic), see Syntocinon nasal spray, p. 193.

P

Paadon caps., p. 680.

Pancreatin, see combn. in Phazyme tabs., p. 806.

Panthenol, see pantothenylol.

Pantothenylol, see combn. in Neopan cream, p. 679.

▶**Panwarfin** Injection (Abbott). Per combn. package: one vial containing warfarin sodium [3-(α-acetonylbenzyl)-4-hydroxycoumarin sodium] 75 mg., sodium chloride 15 mg. and 1 amp. containing sterile water for inj. 3 ml. For the treatment and prophylaxis of intravascular thrombosis and embolism. Specific uses include treatment of myocardial infarction, postoperative thrombophlebitis, acute embolic and thrombotic occlusion of cerebral and peripheral arteries, intravascular clots, recurrent iodiophatic thrombophlebitis and pulmonary embolism. Constant supervision of the patient is essential. Panwarfin lowers the prothrombin content of the blood, thereby increasing the prothrombin time. It must be used with caution and dosage must be controlled by repeated prothrombin determinations. Overdosage may result in hemorrhage. Should not be administered to patient bleeding from any cause. *Dosage:* 50 mg. initially; maintenance, 10 mg. daily. Use immediately after reconstituting. Discard any unused solution. Combn. packages of 5, 25. ℞.

Papaverine HCl, see combn. in Colrex comp. caps., p. 189.

Paromomycin, see Humatin sensitivity discs, p. 677.

Pectin, see combn. in Orahesive powd., p. 192.

Penicillin, α-phenoxyethyl potassium, see potassium phenethicillin.

Pentaerythritol tetranitrate, w/amobarbital, see Metranil-AM Duracap caps., p. 72; Metranil tabs., p. 72.

Pentobarbital sodium, see combn. in Desbutal Gradumet tabs., p. 676.

Pentylenetetrazol, see combn. in Cenalene liq., p. 188.

Pepsin, see combn. in Phazyme tabs., p. 806.

Phazyme tabs., p. 806.

Phenacetin, see combn. in Robaxisal tabs., p. 682; in Soma comp. w/codeine, p. 806.

Phenethicillin potassium, see potassium phenethicillin.

Phenformin HCl NND, p. 680.

Phenindamine tartrate, see combn. in Dalca tabs., p. 70.

Pheniramine maleate, see combns. in MSC Triaminic tabs., p. 192; in Synergen liq., p. 683; in Tain inlay-tabs., p. 745; in Triaminic concentrate, p. 193; in Tussaminic expectorant, p. 808.

Phenobarbital, see combns. in Isuprel comp. elix., p. 191; in Robaxisal-PH tabs., p. 682.

Phenobarbital see combn. in Probital tabs., p. 73.

Phenoxene, see chlorphenoxamine HCl NND, p. 802.

Phenylazo-diamino-pyridine HCl, see Pyridium, p. 73.

Phenylephrine HCl, see combns. in Cheritussar expectorant concentrate, p. 130; in Codimal pH w/codeine syr., p. 130; in Colrex comp. caps., p. 189; in Dalca tabs., p. 70; in Detergel aromatic spray, p. 130; in Detergel emulsion, p. 130; in Dimetapp Extentabs, p. 70; in Covanamine expectorant, p. 745; in Hista-Vadrin tabs., p. 131; in Hycomine comp. tabs., p. 744; in Mercodol and Decapryn Syr., p. 72; in Pilofrin ophth. soln., p. 806; in Synergen liq., p. 683; in Thorphan C.F. tabs., p. 683; in Thormal syr., p. 133; in Tussabar, p. 134; in Win-Codin tabs., p. 134; in Zincfrin ophth. soln., p. 74.

Phenylephrine tannate, see combn. in Rynatuss Tabules and susp., p. 682.

Phenylpropanolamine, see combn. in Coryz tabs., p. 676.

Phenylpropanolamine HCl, see combns. in Coplexen liq., p. 745; in Coryz susp., p. 70; in Covanamine expectorant, p. 742; in Dimetapp Extentabs, p. 70; in Hista-Vadrin tabs., p. 131; in MSC Triaminic tabs., p. 193; in Tain inlay-tabs., p. 745; in Synergen liq., p. 683; in Thorphan C.F. tabs., p. 683; in Tussaminic expectorant p. 808; in Triaminic concentrate, p. 193.

Phospholine iodide, for soln., p. 680; see Echothiophate iodide NND, p. 190.

Pilocarpine HCl ophth. soln., see Isopto Carpine, p. 71.

Pilocarpine nitrate, see combn. in Pilofrin ophth. soln., p. 806.

Pilofrin ophth. soln., p. 806.

Piminodine ethanesulfonate, see Alvodine ethanesulfonate amps. and tabs., p. 745.

Piperidolate HCl, see combn, in Dactil-OB tabs., p. 676.

Placental extract, see Centalone caps. and inj., p. 130.

Planolar tabs., p. 806.

Poliomyelitis vaccine, see comb. in Trinfagen vaccine, p. 133.

Polymyxin B sulfate, see combn. in Cortisporin ophth. susp., p. 70; in Ocutrin eyedrops, p. 132; in Vio-Biotic troches, p. 808.

Polypeptide, crystalline (hormone), see Glucagon HCl amps, p. 131.

Potassium chloride, see combn. in Hydropres Ka-50 tabs., p. 191.

Potassium guaicolsulfonate, see combns. in Cheritussar expectorant concentrate, p. 130; in Codimal PH w/codeine syr., p. 130; in Thormal syr., p. 133; in Tussabar, p. 134.

Potassium iodide, see combn. in Isuprel comp. elix., p. 191.

Potassium permanganate, p. 681.

Potassium phenethicillin (potassium α-phenoxyethyl penicillin); see Semopen tabs. and powd. for oral soln., p. 682.

Potassium α-phenoxyethyl penicillin, see potassium phenethicillin.

Pred-Kam tabs., p. 746.

Prednisolone, see Ulacort tabs., combns.

in Pred-Kam tabs., p. 746; in Somacort tabs., p. 682.

Primase tabs., p. 806.

Primaquine phosphate, see combn. in Camoprim tabs. and Infatabs, p. 676.

Prime-Avite drops, p. 681.

Probital tabs., p. 73.

Prolase-300, see combn. in Primase tabs., p. 806.

Prolixin inj., p. 681.

Propantheline bromide, see combn. in Probital tabs., p. 73.

Propionyl erythromycin ester lauryl sulfate, see Ilosone Pulvules and w/sulfa tabs., p. 746.

Pseudoephedrine HCl, see combn. in Actifed-C expectorant, p. 69.

Purified powdered bone (containing calcium and phosphorus), see combn. in C-Ron Prenatal tabs., p. 189.

Purivax polio vaccine, p. 681.

Pyraldine and Pyraldine No. 2, p. 746.

Pyridium, see combn., in Azo-Mandelamine tabs., p. 69.

Pyrilamine maleate, see combns. in Codimal PH w/codeine syr., p. 130; in Covanamine expectorant, p. 746; in Detergel aromatic spray, p. 130; in Detergel emulsion, p. 130; in MSC Triaminic tabs., p. 192; in Nekatussin, p. 132; in Ototrin ear drops, p. 132; in Thormal syr., p. 132; in Tocillana expectorant concentrate, p. 133; in Synergen liq., p. 683; in Tain inlay-tabs., p. 747; in Triaminic concentrate, p. 193; in Tussabar, p. 134; in Tussaminic expectorant, p. 808.

Q

Quinidine polygalacturonate, see Cardioquin tabs., p. 130.

R

Radio-Hippuran soln., p. 682.

Radio-iodohippurate sodium, see combn. in Radio-Hippuran soln., p. 682.

Radio-L-triiodothyronine, see Triomet soln., p. 683.

Rectalad-aminophylline and **Rectalad-migraine,** p. 807.

Rectalyt jelly, p. 807.

Reserpine, see combn. in Hydropres Ka-50 tabs., p. 191.

Resorcinol, see combn. in Sebasorb skin lot., p. 193.

Riboflavin, see combn. in Obes TT tabs., p. 72.

Riopan tabs., and susp., p. 682.

Robaxisal-PH tabs., p. 682.

Roetinic caps., p. 807.

Romilar CF syr., p. 807.

Rynatuss tabs. and susp., p. 682.

S

Salicylamide, see combns. in Matco analgesic tabs., p. 71; in Tussabar, p. 134.

Scopolamine HBr inj., see combn. in Rectalad-migraine, p. 807.

▶**Sebasorb** Skin Lotion (Summers). Contains pharmasorb (activated attapulgite) 10%, hexachlorophene 1%, colloidal sulfur 5%, resorcinol 2%, zinc oxide 5% in a flesh-tinted, vanishing, greaseless base. May be used as a cosmetic foundation. *Application:* Rub in well several times a day. Tubes of 2 oz. O-t-c.

Semopen tabs. and powd., p. 682.

Septamide tabs., p. 133.

Sinaxar, see styramate NND, p. 682.

Sodium carboxymethylcellulose, see combn. in Orahesive powd., p. 192.

Sodium chloride, see combn. in Panwarfin inj., p. 192.

Sodium citrate, see combns. in Cheritussar expectorant concentrate, p. 130; in Codimal PH w/codeine syr., p. 130; in Mercodol and Decapryn syr., p. 72; in Nekatussin, p. 132; in Thormal syr., p. 133; in Tocillana expectorant concentrate, p. 133; in Tussabar, p. 134.

Sodium diatrizoate, see combn. in Hypaque-M 75% soln., p. 803.

Sodium dimethylacroyl sulfanilamide, see combn. in Rectalyt jelly. p. 807.

Sodium iodohippurate (I^{131}), see Radio-Hippuran soln., p. 682.

Soma Compound and **Soma Compound w/codeine,** p. 807.

Somacort tabs., p. 682.

Staphcillin, p. 746.

Striatran tabs., p. 682.

Styramate NND, p. 682.

Sulfacetamide, see combn. in Septamide tabs., p. 133.

Sulfadimethoxine, see Madribon tabs., p. 191.

Sulfinpyrazone NND, p. 746.

Sulfur, colloidal, see combn. in Sebasorb skin lot., p. 193.

Suplex-C tabs., p. 133.

Synergen liq., p. 683.

▶**Syntocinon** Nasal Spray. (Sandoz). Per 5 cc.: oxytocin (synthetic) 40 U.S.P. u. For use in a number of complications associated with lactation by its action on the myoepithelial elements surrounding the alveoli of the breast causing them to contract and thus force milk into the larger ducts where it is more readily accessible to the baby. It relieves pressure, discomfort or pain due to milk stasis in the presence of physiologic or excessive engorgement. *Dosage:* For initial milk letdown and milk retention, 1 spray in nostril 2–3 min. prior to nursing or pumping of breasts. Plastic squeeze bottles of 5 cc. ℞.

T

Tain inlay-tabs., p. 747.

Talbutal NND, p. 808.

▶**TAO** Suspension (Roerig). Per 5 cc. oral susp. (raspberry); triacetyl oleandomycin equivalent to 125 mg. of oleandomycin. For oral treatment of infections caused by pneumococci, staphlococci and streptococci. Claimed to be especially effective against staphlococci resistant to certain other antibiotics. In excessive pediatric dosage it may cause mild reversible jaundice which disappears on discontinuance of medication. *Dosage:* 1–2 tsps. q.i.d.; children 3 to 5 mg./lb. body weight. Bottles of 60 cc. ℞.

Tentone maleate, see methoxypromazine maleate NND, p. 747.

Tenuate Dospan tabs., p. 74.

Terpin hydrate, see combn. in Nekatussin, p. 132.

Tetanus toxoid, see comb. in Trinfagen vaccine, p. 133.

Tetracycline phosphate complex, see combn. in Mysteclin-F caps., p. 679.

Texacort Cream 100, p. 133.

Theophylline, see combns. in Asmafield elix., p. 129; in Isuprel comp. elix., p. 000.

Thiamine HCl, see comb. in Cenalene, liq., p. 188.

Thiamine mononitrate, see combn. in Obes TT tabs., p. 72.

Thio-Tepa NND, p. 683.

Thormal syr., p. 133.

Thorphan C.F. tabs., p. 683.

Tigan HCl, NND, p. 747.

Tis-u-sol soln., p. 683.

Tocillana expectorant concentrate, p. 133

Tolu fluidextract, see combn. in Tocillana expectorant concentrate, p. 133.

Triacetyloleandomycin, see Tao susp., p. 193; combn. in Tain inlay-tabs., p. 747.

▶**Triaminic Concentrate** (Dorsey). Per cc.: phenylpropanolamine HCl 20 mg., pheniramine maleate 10 mg., pyrilamine maleate 10 mg. Antihistaminic. *Dosage:* Children up to 15 lbs., 1 drop per 2 lbs. of body weight, over 15 lbs., 1 drop per 3 lbs. of body weight, q.i.d. Dropper bottles of 15 cc. ℞.

Trib suppos., p. 683.

Tricolbisonium chloride, see Trib vaginal suppos., p. 683.

Trichlormethiazide, see Metahydrin tabs., p. 72.

Trifluprom azine, see Vesprin suppos., p. 194.

Trimeprazine, see combn. in Coplexen liq., p. 747.

Trimethidinium methosulfate NND, p. 747.

Trimethobenzamide HCl NND, p. 747.

Trinfagen vaccine, p. 134.

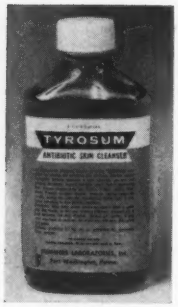
Triomet soln., p. 683.

Trinsicon M caps., p. 74.

Triprolidine HCl, see combn. in Actifed-C expectorant, p. 69.

Trulase tabs., p. 808.

▶**Tryosum** Antibiotic Skin Cleanser (Summers). Per cc.: tyrothricin 0.2 mg. in isopropanol 50%, polysorbate 80 1.25% and acetone 14%, with water q.s. For prevention and treatment of secondary bacterial infection in acne, folliculitis, and other seborrheic conditions. Com-



patible with salicylic acid, resorcinol and its monoacetate. *Dosage:* Applied topically with cotton or gauze pad frequently. Bottles of 4 fl. oz. O-t-c.

Tussabar, p. 134.
Tussaminic expectorant, p. 808.
Tyrothricin, see combns. in Antibiotic troches, p. 188; in Tyrosum antibiotic skin cleanser, p. 193; in Vio-Biotic troches, p. 808.

U

ULO syr., p. 747.
Urea, see combn. in Ototrin ear drops, p. 132.
Ureaphil for inj., p. 747.

V

VAD and VAD w/neomycin creams, p. 683.
VAD lot, p. 683.
Vasodilan (Mead Johnson), see Isoxsuprine HCl NND, p. 191.
▶**Vesprin** Suppositories (Squibb). Per. suppos.: trifluprom azine base 70 mg. (equiv. to 77.3 mg. trifluprom azine HCl); for children, trifluprom azine base 35 mg. (equiv. to 38.6 mg. trifluprom azine HCl). Possesses tranquilizing and antiemetic action, and potentiates action of sedative, narcotic and anesthetic drugs. For prevention and treatment of postoperative emesis, control of nausea and vomiting associated with viral gastroenteritis and other acute infections and management of nausea and vomiting of early pregnancy. No untoward effects have been reported to date, but if allergic manifestations such as skin rash or photosensitivity should occur, the drug should be discontinued; antihistamines may also be of value. In some children with severe behavioral problems who receive prolonged therapy, a reversible parkinsonian syndrome may develop which can be controlled readily by the use of anti-parkinsonian drugs and/or by reducing or discontinuing Vesprin therapy temporarily. Large doses of hypnotics should not be used in conjunction with Vesprin suppositories. Phenothiazine-jaundice associated with trifluprom azine has been exceptionally rare. During continued therapy, routine blood counts are advisable since agranulocytosis and leukopenia have been observed with phenothiazine derivatives. The pediatric patient should be examined routinely for soreness of the mouth, gums, or throat, or any symptoms of upper respiratory infection. The adult patient should be instructed to report any of these complications. If they occur, and confirmatory leukocyte count indicates cellular depression, the drug should be discontinued and appropriate treatment, including intensive antibiotic therapy, should be instituted immediately. *Dosage:* Adults, one 70 mg. suppos. q. 12 hrs.; Children weighing more than 70 lbs., one 70 mg. suppos. (adult) or two 35 mg. suppos. (child). For children weighing 40 to 70 lbs., one 35 mg. suppos.; for children weighing 20 to 40 lbs., dosage should be $^1/_2$ of one 35 mg. suppos. q. 12 hrs. if necessary. Jars of 6. ℞.
Vigran liq., p. 747.
Vistaril, see Hydroxyzine HCl, NND, p. 191.
Vio-Biotic Troches, p. 808.
Vitamin A, see combns. in C-Ron Prenatal tabs., p. 189; in Es-A-Cort lot., p. 677; in Obes TT tabs., p. 72.
Vitamins A and D, see combns. in VAD and VAD w/neomycin creams, p. 683; in VAD sofcream, p. 683.
Vitamins, B-Complex w/A, C, and lipotropics, see combn. in Suplex-C tablets, p. 133.
Vitamin B_{12}, see combn. in Obes TT tabs., p. 72.
Vitamin B_{12} w/intrinsic factor conc., see combn. in Trinsicon M caps., p. 74.
Vitamin D see combns. in C-Ron Prenatal tabs., p. 189; in Obes TT tabs., p. 72.
Vitamin D_2 w/vitamin C, see Prime-Avite drops, p. 681.
Vitamin-mineral combn. see Maturon tabs., p. 808.
Vitamins, see combn. in Atabee-TD caps., p. 798; in Vigran liq., p. 747.

W

Warfarin sodium, see combn. in Panwarfin inj., p. 192.
Win-Codin tabs., p. 134.

Z

Zactane citrate, see ethoheptazine citrate NND, p. 748.
Zarotinin Caps., p. 134.
Zincfrin, p. 74.
Zinc oxide, see combn. in Sebasorb skin lot., p. 193.
Zinc sulfate, see combn. in Zincfrin ophth. soln., p. 74.

Advertising Index

Abbott Laboratories
Dayteens 80
Filmtab 79
Sucaryl 57, 180–183
Vi-Daylin 58, 59

American Druggist
Insurance 129

Armour Pharmaceutical Co.
Chymoral 8, 189

Belmont Laboratories
Mazon 127

Chesebrough-Pond's
Vaseline Sterile Gauze 179

Ciba
Forhistal 185

Coca-Cola 119

Facts and Comparisons 82, 186

Geigy 62

Glenbrook
Bayer Aspirin 177

Hynson, Westcott & Dunning
Lutrexin ..... Jan. fourth cover
Lactinex ..... March fourth cover
Thantis ..... Feb. fourth cover

Lederle Labs.
Institutional ..... 10, March third cover

Eli Lilly & Co.
Darvon 36–37, 104–105, 164–165

Mead Johnson
Poly-Vi-Sol 12–13

Merck and Co.
Di-chloricide 167

Merck Sharp & Dohme
Sucrets 5
Tetrazets 84

Miles Laboratories, Inc. 123

Minnesota Mutual 14, 86, 146

Owens-Illinois
Crestware 169
Drug Retailer 109

Parke, Davis & Co.
Myadec 9

Pfizer Labs.
Institutional ..... Jan. second cover, 139

Phila. Col. of Pharmacy 64, 176

Pitman-Moore Co.
Compligen 61, 83
Emdee Margarine 120–122, 142–144

A.H. Robins Co., Inc.
Dimetapp 3
Monthly check list 67, 117

Schering Corp.
Coriforte 39, 173
Institutional 77

Smith Kline and French
Institutional ..... Feb. third cover, 175

G.D. Searle
Aldactazide ..... Feb. second cover
Enovid ..... Mar. second cover
Lomotil 65

E.R. Squibb & Sons
Institutional ..... Jan. third cover

Warner-Chilcott 7
Anusol 141

Johann Weiss
Jowe Junior 172

Winthrop Laboratories
Neo-Synephrine 187
Win-Codin 63, 115

Yorke Publishing Co. 137

WHICH ONE FOR YOUR OWN FAMILY?

When you fill a prescription for **your** wife or **your** child, do you really feel that any of the generic products will do—that any brand is reliable—or is there one particular brand you would prefer?

■ Don't you find yourself choosing a specific "brand name" because you feel there is something more behind the label statement—more care in selecting raw materials, intricate compounding, and exhaustive testing; and more knowledge of product problems and needs through continuing research? These are the intangibles which suddenly become very real when the patient is someone near and dear.

■ You may not be able to measure all intangibles which add up to Lederle Quality, but they provide the true basis of physician confidence and trust—seen in the continuing professional choice of a Lederle brand.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

For restoring and stabilizing the intestinal flora

LACTINEX®

Mixed culture of Lactobacillus acidophilus and bulgaricus with metabolic enzymes naturally produced.

TABLETS & GRANULES

For gastrointestinal disturbances, diarrhea (antibiotic induced and others),[1,2,3] fever blisters and canker sores of herpetic origin.[4]

Usual dosage for adults and children: Four tablets or one packet of granules chewed and swallowed four times a day.

Supplied: Tablets in bottles of fifty—Granules in boxes of twelve one gram packets.

(1) Siver, Robert H.: Current Medical Digest, Vol. XXI, No. 9, September 1954. (2) McGivney, John: Texas State Journal of Medicine, Vol. 51, No. 1, January 1955. (3) Frykman, Howard M.: Minnesota Medicine, Vol. 38, No. 1, January 1955. (4) Weekes, D. J.: N. Y. State Journal of Medicine, Vol. 58, No. 16, August 1958.

HYNSON, WESTCOTT & DUNNING, INC.
Baltimore, Md.

H W D